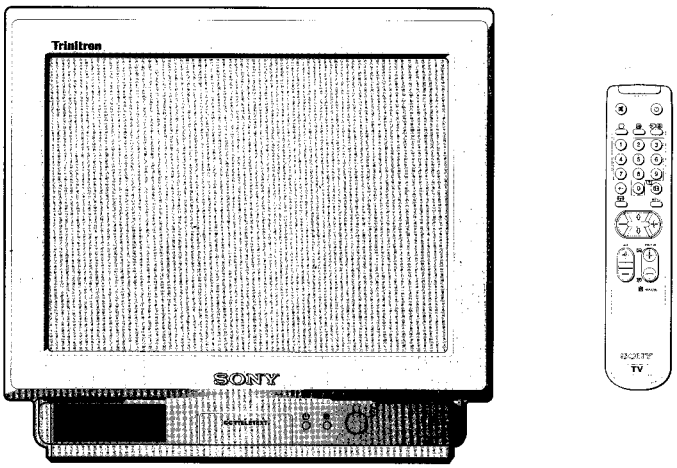
SERVICE MANUAL

BE-4A CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-M2170A	RM-836	Italian	SCC-J05B-A
KV-M2171A	RM-836	Italian	SCC-J05A-A
KV-M2170B	RM-836	French	SCC-J06A-A
KV-M2171B	RM-836	French	SCC-J06B-A
KV-M2170D	RM-836	AEP	SCC-J08A-A
KV-M2171D	RM-836	AEP	SCC-J08B-A
KV-M2170E	RM-836	Spanish	SCC-J04B-A
KV-M2171E	RM-836	Spanish	SCC-J04A-A
KV-M2170K	RM-836	OIRT	SCC-J03B-A
KV-M2171K	RM-836	OIRT	SCC-J03A-A
KV-M2171KR	RM-836	Russian	SCC-J03C-A
KV-M2170L	RM-836	Irish	SCC-J02B-A
KV-M2171L	RM-836	Irish	SCC-J02A-A
KV-M2170U	RM-836	UK	SCC-J01B-A
KV-M2171U	RM-836	UK	SCC-J01A-A



MICROFILM

TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12, S1-S20 UHF: E21-E69	PAL
French	B/G/H, L	VHF: E2-E12, S1-S20, S21-S41, F2-F10, B-Q UHF: E21-E69, F21-F69	PAL, SECAM
AEP	B/G/H	VHF: E2-E12, S1-S20, S21-S41 UHF: E21-E69	PAL, SECAM
Spanish	B/G/H	VHF: E2-E12, S1-S20, S21-S41 UHF: E21-E69	PAL
OIRT Russian	B/G, D/K	B/G VHF: E2-E12 UHF: E21-E69 Hyper: S1-S41 (KV-M2170K/M2171K) Super: S1-S20 (KV-M2171KR) D/K VHF: R01-R12 UHF: R21-R69	PAL, SECAM NTSC3.58/4.43 (video input only)
Irish UK	I	VHF: A-J (KV-M2170L/M2171L) UHF: 21-69 Huper: S1-S41 (KV-M2170L/M2171L)	PAL

MODEL	Italian	French	AEP	Spanish	OIRT Russian	Irish UK
Power Consumption	58W	58Wh	58W	58W	58W	75W

SPECIFICATIONS

Picture Tube — Hi-Black Trinitron
Approx. 55 cm (21 inches)
(Approx. 51 cm picture measured diagonally)
100° -deflection

Input/Output Terminals

[INPUTS]

21-pin connector (CENELEC standard)
- audio / video input
- RGB input

[OUTPUTS]

Ω Headphone jack : minijack

Sound output — 4W (RMS)
5W (music power)
Dimensions — 513x475x475 mm approx.
Weight — Approx. 21.0kg
Supplied accessories — RM-836 Remote Commander (1)
IEC designated batteries (2)
Other features — TELETEXT (KV-M2171A/M2171B/M2171D/M2171E/M2171K/M2171KR/M2171L/M2171U)

[RM-836]

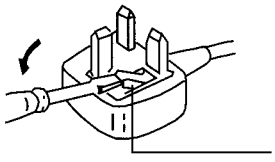
Remote control system	infrared control
Power requirements	3V dc (2 batteries) R6 (size AA)
Dimensions	Approx. 210x45x24 mm (w/h/d)
Weight	Approx. 90g (Not including batteries)

Design and specifications are subject to change without notice.

Item \ Model name	KV-M2170A KV-M2171A	KV-M2170B KV-M2171B	KV-M2170D KV-M2171D	KV-M2170E KV-M2171E	KV-M2170K KV-M2171K KV-M2171KR	KV-M2170L KV-M2171L KV-M2170U KV-M2171U
Pal Comb	OFF	OFF	OFF	OFF	OFF	OFF
PIP	OFF	OFF	OFF	OFF	OFF	OFF
RGB Priority	ON	ON	ON	ON	ON	ON
Woofer Box	OFF	OFF	OFF	OFF	OFF	OFF
Scart 1	ON	ON	ON	ON	ON	ON
Scart 2	OFF	OFF	OFF	OFF	OFF	OFF
Front in (3)	OFF	OFF	OFF	OFF	OFF	OFF
Scart 4	OFF	OFF	OFF	OFF	OFF	OFF
Projector	OFF	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	OFF	OFF	OFF	OFF	OFF	OFF
Norm B/G/H	ON	ON	ON	ON	ON	OFF
Norm I	OFF	OFF	OFF	OFF	OFF	ON
Norm D/K	OFF	OFF	OFF	OFF	ON	OFF
Norm AUS	OFF	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF	OFF	OFF
Language Preset	Italian	French	German	Spanish	OIRT	English

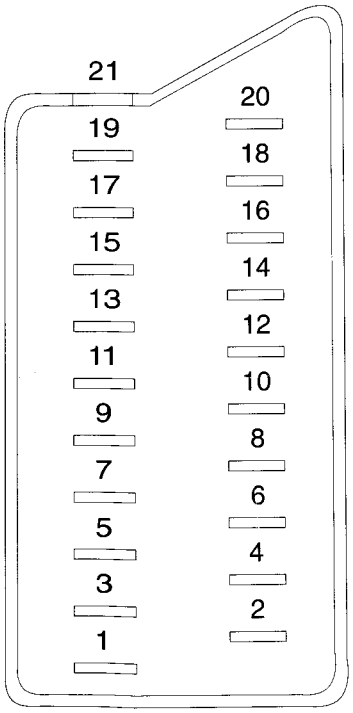
WARNING (KV-M2170L/M2171L/M2170U/M2171U only)

The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the ASTA mark.
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME.
IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED.
THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.
When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with the screwdriver blade and replace the fuse.

21 pin connector (⊙-1)



Pin No		Signal	Signal level
1	○	Audio output B (right)	Standard level: 0.5Vrms Output impedance:less than 1kohm*
2	○	Audio input B (right)	Standard level:0.5Vrms Input impedance:More than 10kohms*
3	○	Audio output A (left)	Standard level:0.5Vrms Output impedance:less than 1kohm*
4	○	Ground (audio)	
5	○	Ground (blue)	
6	○	Audio input A (left)	Standard level:0.5Vrms Input impedance:More than 10kohms*
7	○	Blue input	0.7V±3dB, 75ohms, positive
8	○	Function select (AV control)	High state (9.5—12V):Part mode Low state (0—2V):TV mode Input impedance:More than 10kohms Input capacitance:Less than 2nF
9	○	Ground (green)	
10	○	Open	
11	○	Green	Green signal:0.7V±3dB. 75ohms, positive
12	○	Open	
13	○	Ground(red)	
14	●	Ground (blanking)	
15	○	Red input	0.7V±3dB, 75ohms, positive
	—	(S signal) croma input	0.3V±3dB, 75ohms, positive
16	○	Blanking input (Ys signal)	High state (1—3V) Low state (0—0.4V) Input impedance:75ohms
17	○	Ground (video output)	
18	○	Ground (video input)	
19	○	Video output	1V±3dB, 75ohms, positive Sync:0.3V(–3, +10dB)
20	○	Video input	1V±3dB, 75ohms, positive Sync:0.3V(–3, +10dB)
	—	Video Input/Y (S signal)	1V±3dB, 75ohms, positive Sync:0.3V(–3, +10dB)
21	○	Common ground (plug, shield)	

○ Connected ● Not Connected (open) * at 20Hz - 20kHz

TABLE OF CONTENTS

Section	Title	Page
1. GENERAL		
	Getting Started	6
	TV Operations	8
	Adjusting the picture and sound	8
	Menu Operation	9
	Advanced Presetting Functions	10
	Teletext Operation	11
	Optional Connections	12
	Addtional Information	12
2. DISASSEMBLY		
2-1.	Rear Cover Removal	14
2-2.	Service Position	14
2-3.	Picture Tube Removal	15
3. SET-UP ADJUSTMENTS		
3-1.	Beam Landing	16
3-2.	Convergence	17
3-3.	Screen (G2), Drive, White Balance, Sub Colour and Sub Brightness	19
3-4.	Focus	19
4. CIRCUIT ADJUSTMENTS		
4-1.	Electrical Adjustments	20
4-2.	Test Mode 2 :	21
4-3.	BE-4A Self Diagnostic Software	23
5. DIAGRAMS		
5-1.	Block Diagram	25
5-2.	Circuit Boards Location	29
5-3.	Schematic Diagrams and Printed Wiring Boards	29
	* A Board	33
	* C Board	39
5-4.	Semiconductors	41
6. EXPLODED VIEWS		
6-1.	Chassis and Picture Tube	42
7. ELECTRICAL PARTS LIST		44

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

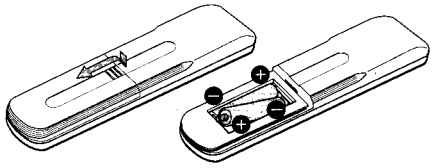
ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

Getting Started

Step 1

Inserting the Batteries into the Remote Commander



Step 2

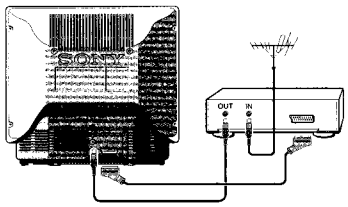
Connecting the Aerial

If you connect a VCR, skip to step 3.

Connect an external aerial to the socket X.

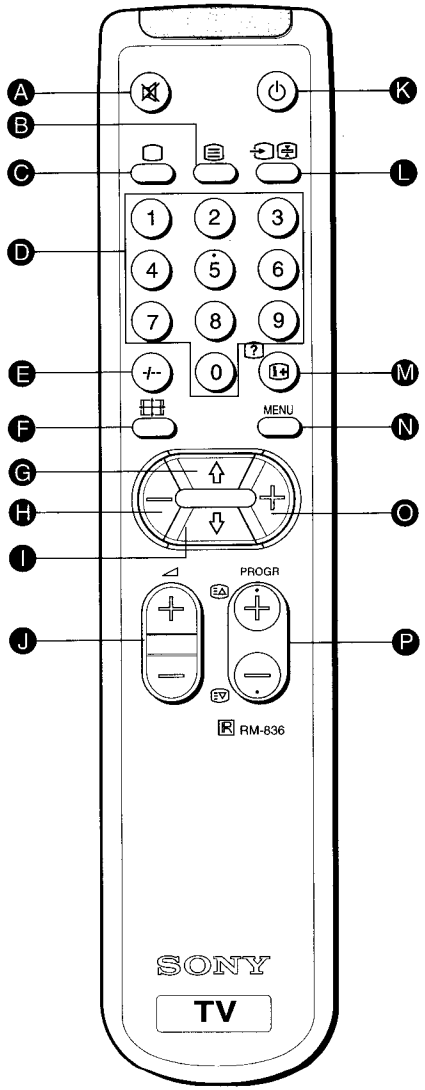
Step 3

Connecting a VCR



- It is recommended to tune in the VCR signal to programme number "0". For details, see "Presetting Channels Manually" on page 12.

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.



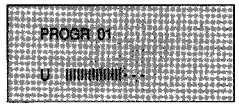
Step 4

Presetting Channels Automatically

TV searches for all available channels. If manual tuning is preferred see Menu option - Presetting Channels Manually.

1 Plug into mains.
Press power switch ⏻ W on TV set.

2 Press and hold ⏭ S on TV set for 2 seconds.
Auto tuning starts and screen shows.



Notes • When Auto tuning stops the programme on position 1 is seen.
• KV-M2171U/M2171L only – channels are automatically stored as follows:

	KV-M2171U	KV-M2171L
Programme 1	BBC1	RTE1
Programme 2	BBC2	RTE2
Programme 3	ITV	BBC1
Programme 4	CH4 or S4C	BBC2
Programme 5	–	ITV
Programme 6	–	CH4 or S4C

TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the Remote Commander.

To	Press
Switch on	⏻ W on TV
Switch off temporarily	⏻ K *TV is now in standby mode, ⏻ indicator V on TV lights.*
Switch on again	▭ C, PROGR +/- P U or any number button D
Switch off completely	⏻ W on TV *To save energy we recommend switching off completely when TV is not in use.*
Select programmes	PROGR +/- P U or number buttons D *For double digit numbers press -/-- E then the number e.g. For 23, press -/-- E then 2 and 3.*
Display the programme number	ⓘ M *Press again to make programme number disappear.*
Adjust the volume	🔊 +/- J T
Mute the sound	🔇 A *Press again to restore sound.*
View video input	⏎ L R *Press again to return to TV programme.*
View programmes in 16:9 mode	▭ F *Press again to return to 4:3 mode.*

Viewing Teletext

Teletext is an information service broadcast by TV stations.

1 Select the channel which carries the teletext service you wish to receive.

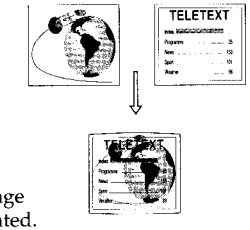
2 Press ▤ B to switch on teletext.

3 Input three digits for the page number using the programme number buttons D or PROGR +/- PU.

4 Press ▢ C to switch off teletext.

Note • Teletext errors may occur if the broadcasting signals are weak.

Using Other Teletext Functions



Superimposing teletext on the TV

Press ▤ B once in teletext mode or twice in TV mode to superimpose teletext on the TV screen.
Press ▤ B again to cancel superimposing.

Freezing a teletext subpage

Press ⊕ L (HOLD) to freeze the subpage. Freezing the page prevents the information that is displayed from being updated.
Press ⊕ L to cancel HOLD and allow update to continue.

Revealing concealed information (eg: answers to a quiz)

Press ? M to reveal information.
Press again to conceal the information.

Using colour buttons to access pages

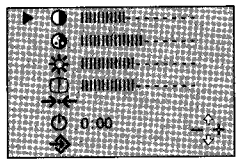
When the colour coded menu appears at the bottom of a page, press the colour button (red, green, blue or yellow) GHIO to access the corresponding page.

Note • A programme status message in a blue box may appear when you change programmes (depends on broadcasters).

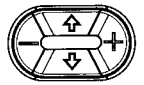
Use buttons on Remote Commander to control Menu screen.

MENU N
Menu Screen on/off

Green G
scroll up



Red H
decrease



Yellow O
increase/confirm(OK)

Blue I
scroll down

Adjusting the Picture

1 Press MENU N.

2 Press green G or blue I button to select the item you wish to change.

Symbol	Item	- Effect	+
◑	Picture	Less	More
◕	Colour	Less	More
☼	Brightness	Darker	Brighter
◫	Sharpness	Softer	Sharper

3 Press red H or yellow O button to change levels.

4 Press MENU N to return to normal TV screen.

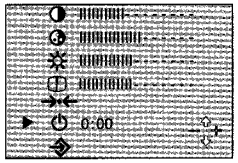
Note • To reset to factory preset picture levels, press green G or blue I button to select →•← and press yellow (OK) O button.

Using the Sleep Timer

The TV may be set to switch to the standby mode automatically after a length of time chosen by you. You may set the time in 30 minutes steps up to 4 hours.

1 Press MENU ⓝ.

2 Press green ⓖ or blue ⓘ button to select ⏻.



3 Press red ⓗ or yellow ⓞ button to set time delay.
0.00 (OFF) 0.30 1.00 1.30 .... 4.00

4 Press MENU ⓝ to return to normal TV screen.
When watching TV, press ⓜ to display time remaining.

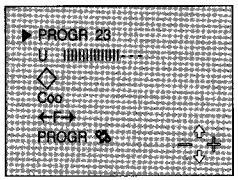
Presetting Channels Manually

Up to 60 programme positions are available for presetting channels.

1 Press MENU ⓝ.

2 Press green ⓖ or blue ⓘ button to select ◈ and press yellow (OK) ⓞ button.

3 Select programme number using PROGR +/- ⓟⓤ or the number buttons ⓓ.



4 Press green ⓖ or blue ⓘ button to select tuning bar (||||||····) and press red ⓗ or yellow ⓞ button to start channel search. When a channel is found the tuning bar stops moving and you see the picture.

5 If you want to store, press green ⓖ or blue ⓘ button to select ◇ and press yellow (OK) ⓞ button. If you do not want to store, press red ⓗ or yellow ⓞ button to continue search.

6 Repeat steps 3 to 5 for all other channels.

7 Press MENU ⓝ to return to normal TV screen.

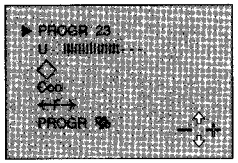
Skipping Programme Positions

You can skip unused programme positions when selecting channels with the PROGR +/- P U buttons. You can still select them, however, using the number buttons D.

1 Press MENU N.

2 Press green G or blue I button to select ◈ and press yellow O button.

3 Select programme number you want to skip using PROGR +/- P U button or number buttons D.



4 Press green G or blue I button to select Coo and press yellow (OK) O button.

5 Press green G or blue I button to select ◇ and press yellow (OK) O button to store.

6 Repeat steps 3 to 5 for other unused programme positions.

7 Press MENU N to return to normal TV screen.

Note • To restore a skipped programme number, refer to "Presetting Channels Manually".

Fine-Tuning Channels

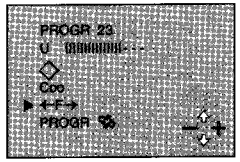
You can fine tune a stored channel if necessary.

1 Select the channel you wish to fine tune.

2 Press MENU N.

3 Press green G or blue I button to select ◈ and press yellow (OK) O button.

4 Press green G or blue I button to select ←F→ and use red H or yellow O button to adjust tuning.



5 Press green G or blue I button to select ◇ and press yellow (OK) O button to store.

6 Press MENU N to return to normal TV screen.

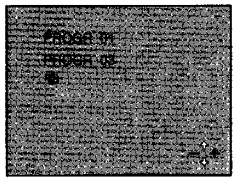
Exchanging Programme Positions

After tuning you may wish to rearrange the programme positions.

1 Press MENU N.

2 Press green G or blue I button to select ⇨ and press yellow (OK) O button.

3 Press green G or blue I button to select PROGR and press yellow (OK) O button.



4 Press red H or yellow O button to select the first programme position.

5 Press the blue I button.

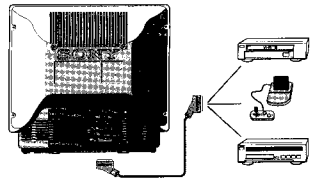
6 Press the red H or yellow O button to select the second programme position.

7 Press blue I button to select and press yellow (OK) O button to exchange.

8 Repeat steps 4 to 7 for other programme positions.

9 Press MENU N to return to normal TV screen.

Using the 21-pin Connector



Your TV has one 21-pin connector Y on the rear of the set. You can connect optional audio or video equipment to this connector, such as a VCR, video games or a video disc player.

1 Press ⇨ L R to view the video input signal.

2 Press ⇨ L R or ▢ C to return to normal TV screen.

Connecting Headphones

Plug in the headphones to the ∩ Q socket on the front of the TV set, then the sound from the speaker is muted.

Troubleshooting

Here are some simple solutions to the problems which affect the picture and sound.

Problem	Solution
No picture, screen is dark, no sound	• Plug the TV in. • Press ⏻ W on the TV. • Press ▢ C or the programme number D on the remote commander if ⏻ indicator V is on. • Check the aerial connection. • Check that the video source is on. • Turn the TV off for 3 or 4 seconds and then turn it on again using ⏻ W.
Poor or no picture (screen is dark, sound is good)	• Press MENU N and adjust brightness picture and colour levels.
Good picture, no sound	• Adjust the volume ◿ +/– J T . • Disconnect any headphones. • Press 🔇 A if 🔇 is displayed on the screen.
No colour on colour programmes	• Press MENU N and adjust colour balance. • Press MENU N and reset to factory settings.
Distorted picture when you change programmes or select teletext	• Turn off the equipment connected to the 21-pin connector Y.
Remote commander does not function	• Replace the batteries.

• If you continue to have these problems, have your TV serviced by qualified personnel.
• NEVER open the casing yourself.

Specifications

TV system
I

Colour system
PAL

Channel coverage
KV-M2170L/M2171L
UHF 21-69
VHF A-J
Hyper S1-S41
KV-M2170U/M2171U
UHF 21-69

Picture tube
HiBlack Trinitron
Approx 54.5 cm (21 inches) (Approx 51 cm picture measured diagonally)

Inputs
21-pin connector (CENELEC standard) including audio/video input, RGB input

Outputs
Headphone jack - minijack

Sound output:
4W (RMS)
5W (music power)

Power consumption
75W

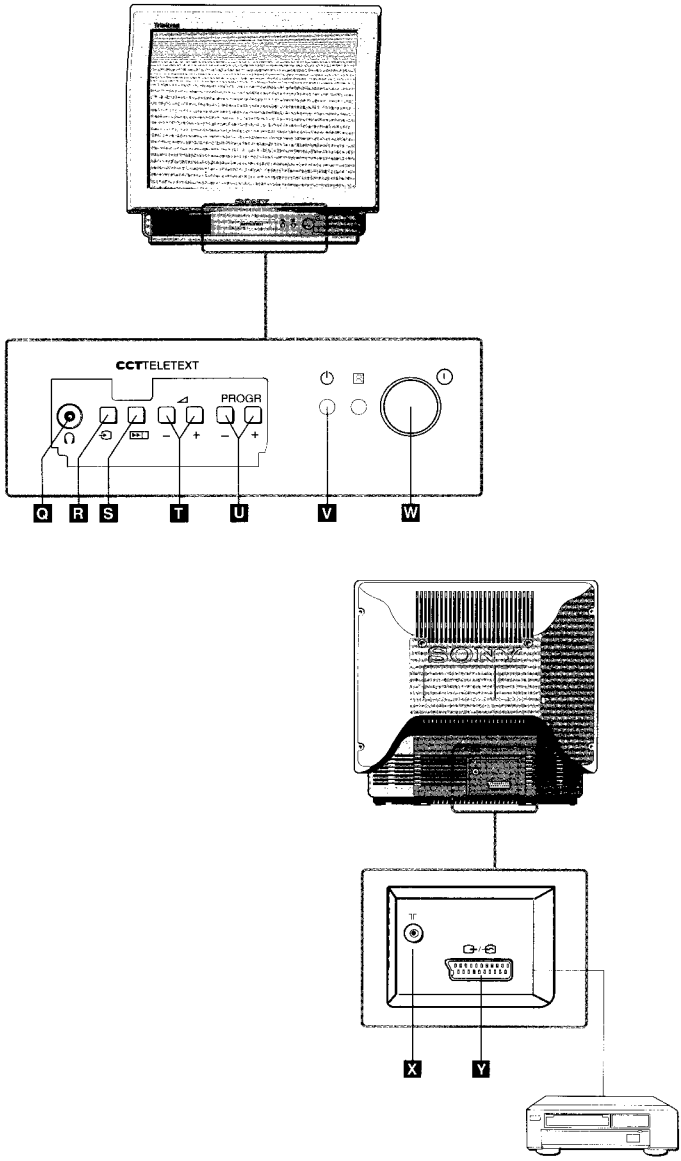
Dimensions (wxhxd)
513x475x475mm approx.

Weight
21 kg

Accessories supplied
RM-836 Remote Commander (1)
IEC designated batteries (2)

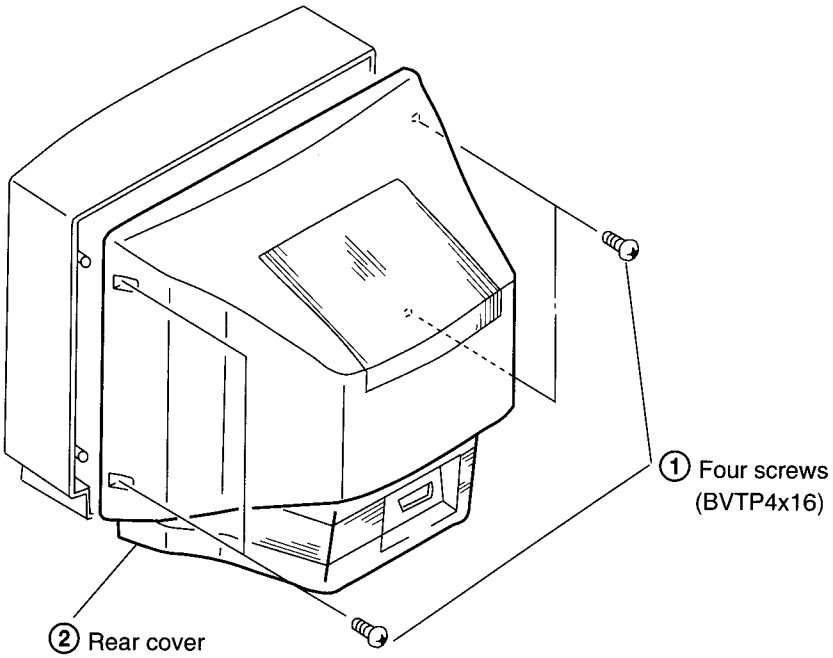
Other features
TELETEXT (for KV-M2171U/M2171L)

• Design and specifications are subject to change without notice.

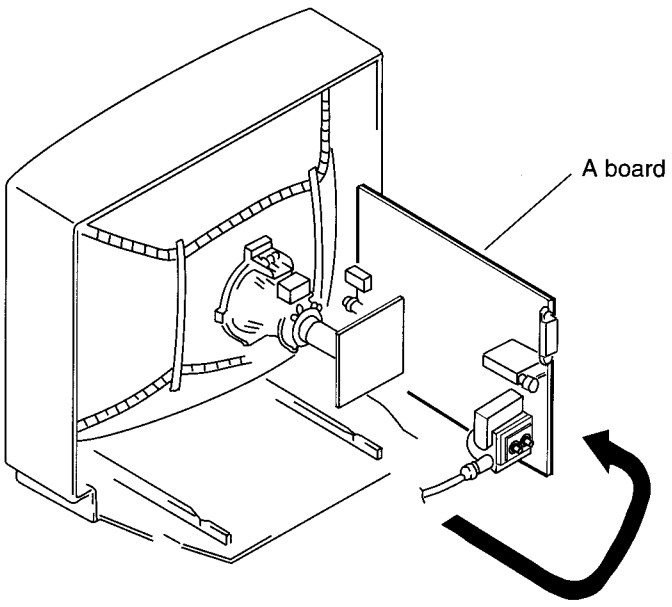

CCTTELETEXT
PROGR
Q
R
S
T
U
V
W
SONY
X
Y

SECTION 2
DISASSEMBLY

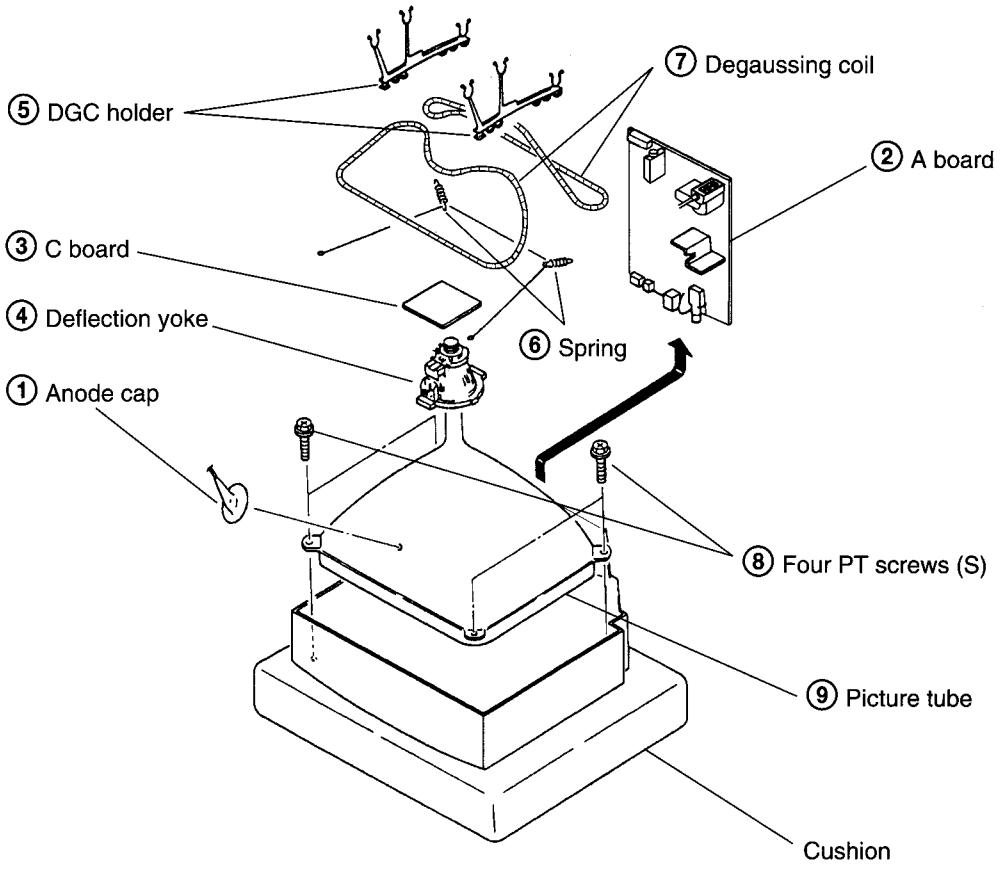
2-1. REAR COVER REMOVAL



2-2. SERVICE POSITION



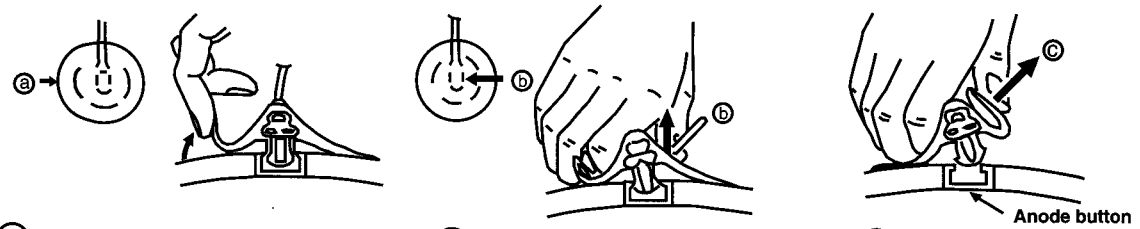
2-3. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

*** REMOVING PROCEDURES.**



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ

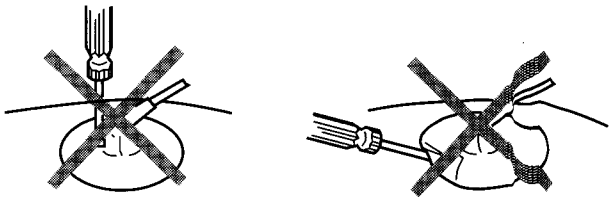
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ

• HOW TO HANDLE AN ANODE-CAP

① Don't damage the surface of anode-cap with sharp shaped material !

② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built into the rubber.

③ Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or damage the rubber.



SECTION 3
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with the rated power supply voltage, unless otherwise noted.

The Contrast and Brightness controls should be set as follows unless otherwise noted:

◑ CONTRAST control 80%
(or Normal by commander)
☼ BRIGHTNESS control 50%

Perform the adjustments in the following order:
1. Beam Landing
2. Convergence
3. Screen (G2), Drive, White Balance, Sub Colour and Sub Brightness.
4. Focus

Note: Test Equipment Required.
1. Colour bar/Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter
5. Oscilloscope

Preparation:
- In order to reduce the influence of external magnetic forces on the picture tube, face the TV set in an easterly or westerly direction.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser.

3-1. BEAM LANDING

Demagnetize with a degausser.
1. Input an all white raster signal from the pattern generator.
   CONTRAST } normal
   BRIGHTNESS }
2. Switch the raster signal of the pattern generator to Red.
3. Move the deflection yoke backward, and adjust with the purity control so that Red is at the centre and the Blue and Green are evenly spaced at the sides. see (Fig. 3-1 - 3-3)
4. Move the deflection yoke forward, and adjust so that the entire screen becomes Red. (Fig. 3-1)
5. Switch the raster signal to Blue and then Green to confirm the condition.
6. When the position of the deflection yoke has been determined, tighten it with the deflection yoke mounting screw.
7. When the landing at the corners is not correct, adjust by using disk magnets. (Fig. 3-4)

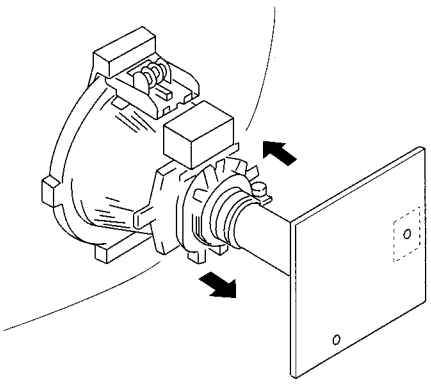


Fig. 3-1

Fig. 3-2

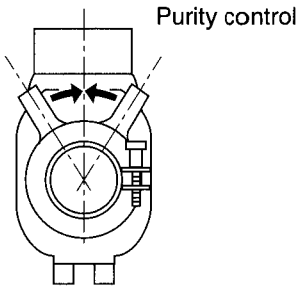


Fig. 3-3

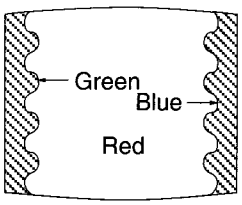
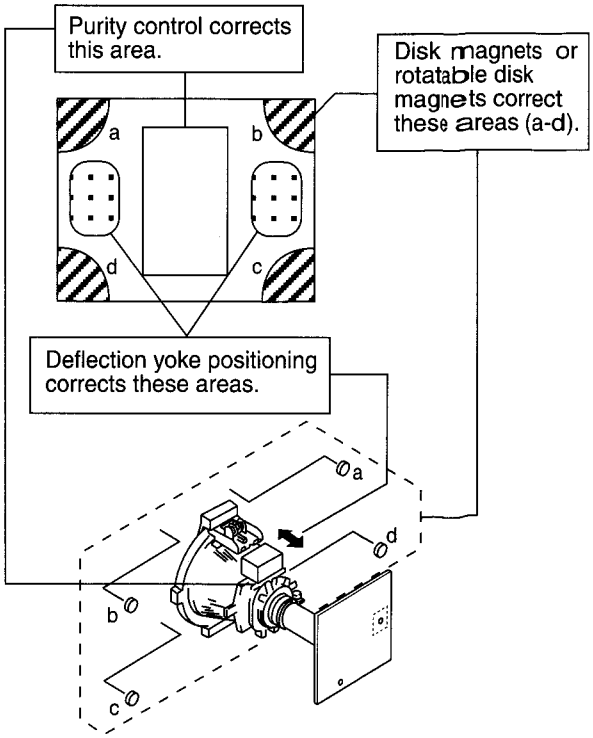


Fig. 3-4

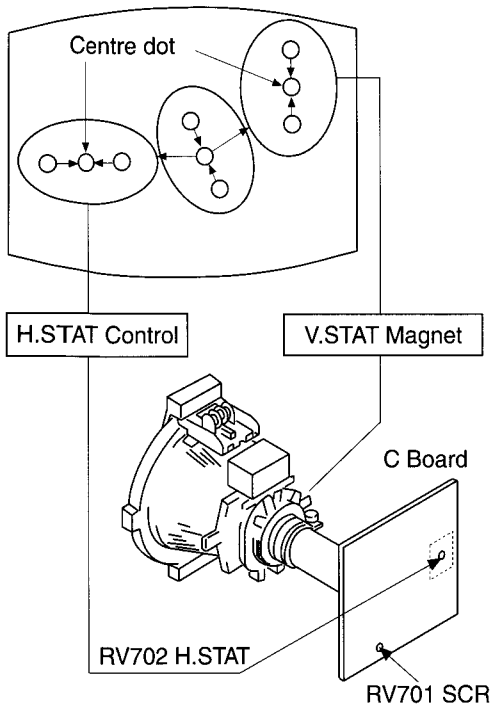


3-2. CONVERGENCE

Preparation:

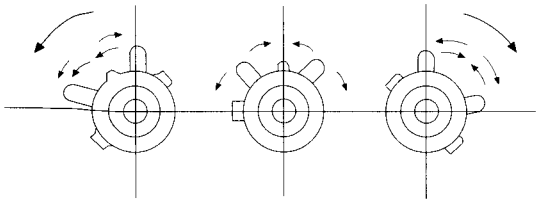
- Before starting, perform FOCUS, H.SIZE, and V.SIZE adjustments.
- Set the BRIGHTNESS control to minimum.
- Input a dot pattern from the pattern generator.

(1) Horizontal and Vertical Static Convergence

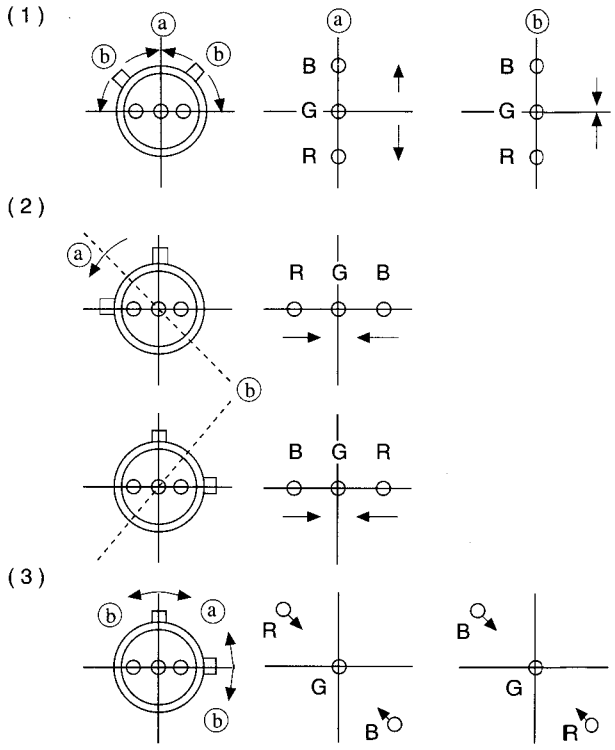


1. Adjust the H.STAT control to converge the Red, Green and Blue dots at the centre of the screen. (Horizontal movement)
2. Adjust the V.STAT magnet to converge the Red, Green and Blue dots at the centre of the screen. (Vertical movement)

- If the horizontal dots cannot coincide with variable range of the H.STAT convergence, adjust together with the V.STAT convergence while tracking.
  (Adjust the convergence by tilting the V.STAT convergence or by opening or closing the V.STAT convergence.)



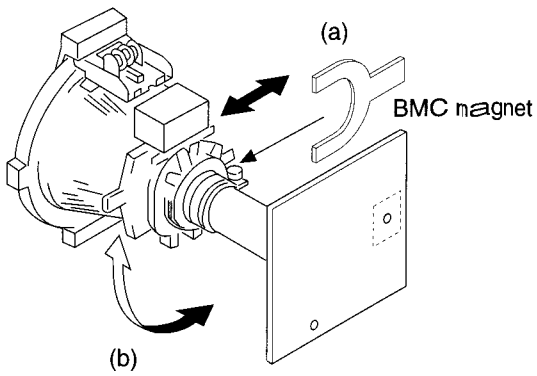
3. When the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the Red, Green and Blue dots move as shown below.



If the Red and Blue dots do not converge with the Green dots, perform the following steps.

1. Move the BMC magnet (a) to correct for insufficient H.static convergence.
2. Rotate the BMC magnet (b) to correct for insufficient V.static convergence.

In either case, repeat the Beam Landing Adjustment.

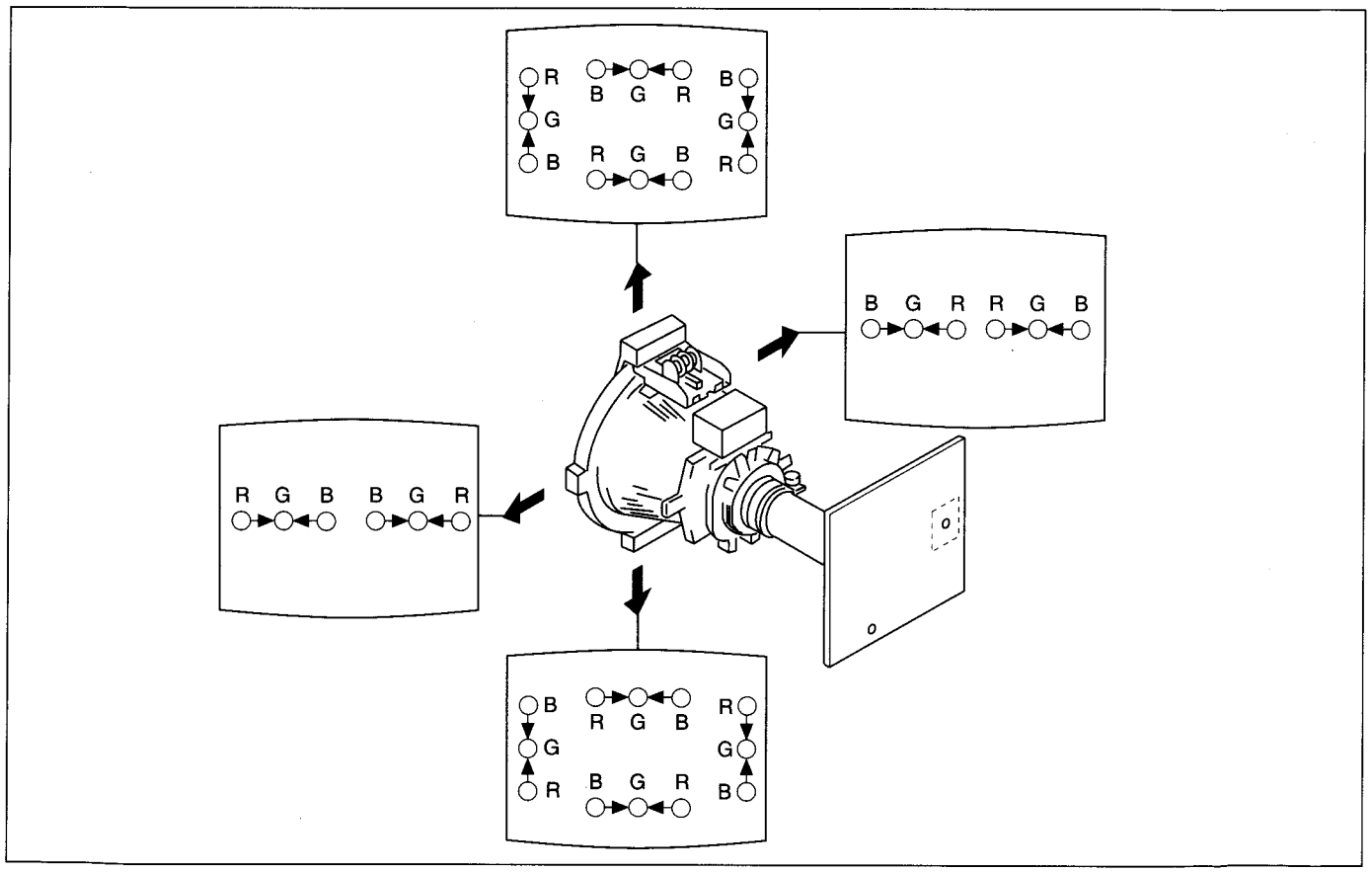


(2) Dynamic Convergence Adjustment

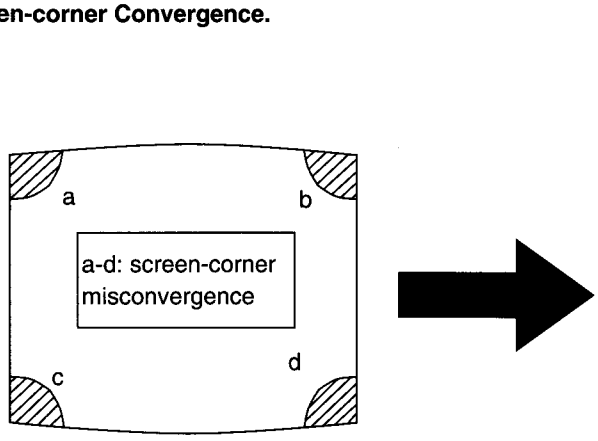
Preparation:

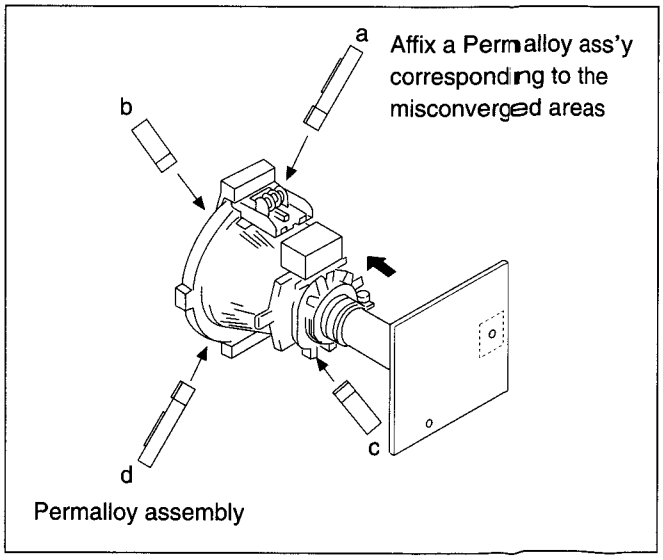
- Before starting to perform the Horizontal and Vertical static convergence adjustment.

1. Slightly loosen the deflection yoke screw.
2. Remove the deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

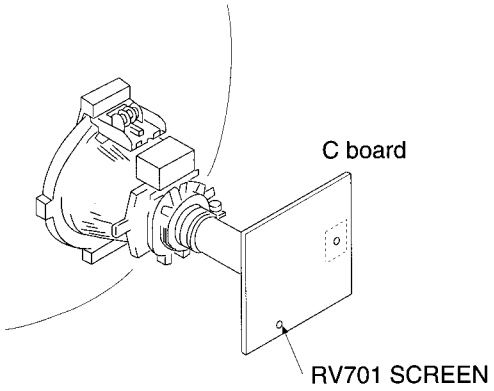


(3) Screen-corner Convergence.





3-3. SCREEN (G2), DRIVE, WHITE BALANCE, SUB COLOUR and SUB BRIGHTNESS.

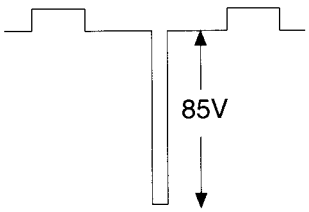


Screen (G2) setting

1. Input a 0 IRE (Black Level) signal from the pattern generator.
2. Enter into the Service Mode "Test""Test" and 38.
3. Adjust RV701 until the Down arrow is displayed.
4. Adjust RV701 until the Down arrow just disappears.
5. Press the TV Button on the Remote Commander to store the data.

Drive Level

1. Input a Video signal containing a small area of 100% white on a black background.
2. Connect an oscilloscope to Pin (10) of J701 (R OUT) on the C Board.
3. Set the Picture to maximum using "Test""Test" and 01.
4. Enter into the Service mode (Adjust Menu).
5. Using the Blue and Green buttons select "RED HWB".
6. Using the Red and Yellow buttons on the Remote Commander adjust until the oscilloscope waveform has an amplitude of 85V.

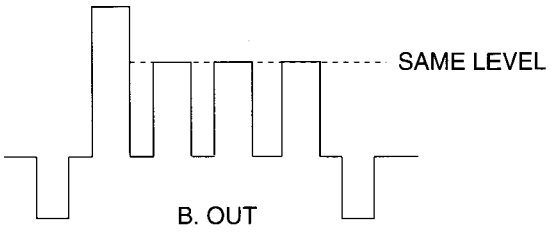


White Balance Adjustment

1. Input an all white pattern from the pattern generator.
2. Adjust the Colour and Brightness controls to the standard level.
3. Enter into the Service Mode.
4. Adjust the Green HWB and Blue HWB so that the White Balance becomes optimum.

Sub Colour Adjustment

1. Input a PAL colour bar pattern from the pattern generator.
2. Connect an oscilloscope to Pin (8) of J701 (B OUT) on the C Board.
3. Enter into the Service Mode "Test""Test" and 22.
4. Using the Red and Yellow buttons on the Remote Commander adjust until the oscilloscope waveform becomes as follows :



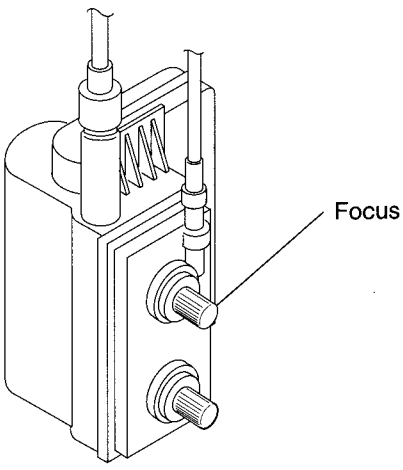
Note : If the TV is able to receive PAL and SECAM transmissions, repeat the above procedure using a Secam colour bar signal.

Sub Brightness Adjustment

1. Input a Philips pattern from the pattern generator.
2. Enter into the Service Mode "Test""Test" and 23.
3. Using the Red and Yellow buttons on the Remote Commander adjust until the 0 IRE of the grey scale and the cut off are only slightly visible on the screen.

3-4. FOCUS

1. Receive a television broadcasting.
2. Normalize the picture setting.
3. Adjust the focus control on the flyback transformer to become the focus in the centre area properly.
   Bring only the centre area of the screen into focus, the magenta-ring appears on the screen. In this case, adjust the focus to optimize the screen uniformly.



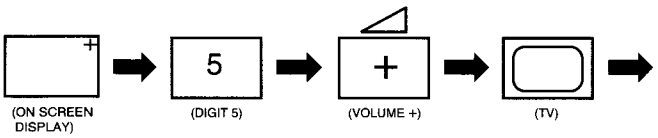
SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied Remote Control Commander RM-836.

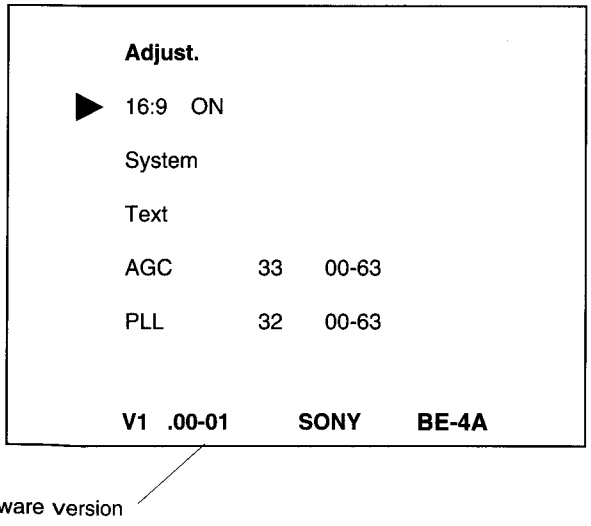
HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power of the set and enter into stand-by mode.
2. Press the following sequence of buttons on the Remote Control Commander.



"TT-- " will appear in the top right corner of the screen Other status information will also be displayed.

3. Press the MENU button on the Remote Commander to obtain the menu on the screen.



4. Press the Blue (Next) or Green (previous) buttons to select the adjustment item from the table.
5. Press the Yellow (+) or Red (-) buttons to change the data as required.
6. Turn off the power to quit the service mode when adjustments are completed.

Range of adjustments available from the on screen menu system.

Adjustment	Set	Range
16:9 Off	Select	ON/OFF
System	Select	BG-L, BG-DK UK, Eire, BG
Text	Select	EAST/WEST
AGC	Adj.	00 - 63
PLL	Adj.	00 - 63
B&W Delay	Adj.	00 - 63
Ver Size	Adj.	00 - 63
Ver, Breath	00	00 - 63
Par, Ampl	00	00 - 63
Par, Tilt	32	00 - 63
V, Linear	Adj.	00 - 63
Corn, corr	00	00 - 63
V, Cen or EW	Adj.	00 - 63
V, Position	42	00 - 63
H, Centre	Adj.	00 - 63
Blue HWB	Adj.	00 - 63
Green HWB	Adj.	00 - 63
Red HWB	Adj.	00 - 63

4-2. TEST MODE 2:

TT -- Mode is available by pressing the Test button twice, O.S.D 'TT --' appears. The functions described below are available by pressing two digits. To release the 'TT --' mode, press 0 twice, press 'TEST' , press 'TV' or switch the TV into Stand-by mode.

00	Switch 'TT--' Mode off.
01	Set picture level to maximum.
02	Set picture level to minimum.
03	Set volume to 35%.
04	Set volume to 50%.
05	Set volume to 65%.
06	Set volume to 80%.
07	Ageing condition (picture max., brightness max.).
08	Shipping condition (Analog values are RESET to factory setting, Prog 1 is selected, TT--mode switched off, Vol = 35%).
09	Dummy.
10	No function.
11	Dummy
12	Text Picture Level Offset (Enable/Disable)
13	Select Odd / Even field for Non-interlaced teletext.
14	Select Interlaced / Non-interlaced teletext display.
15	Read factory setting from ROM to NVM - Reads Volume, Brightness, Picture, Hue, Sharpness and Colour values from ROM to the actual used values (Last Power Memory).
16	No function
17	Enable / Disable Sharpness Operation.
18	Enable / Disable Teletext Operation.
19	Enable / Disable NTSC Operation.
20	No function.
21	Sub Picture.
22	Sub Colour (Pal / Secam Different Stores)
23	Sub Brightness.
24	Destination System BG/L.
25	Destination Systems BG/L.
26	Destination Systems I.
27	Destination System I/I'.
28	Destination BG only.
29	Dummy.
30	No function.
31-32	Dummy.
33	Auto AGC Adjust.
34	Auto PLL Adjust.
35-37	Dummy.
38	Enter G2 adjustment mode.
39	Dummy.
40	No function.
41	Re-initialise NVM.
42	Dummy.
43	Re-initialise Geometry settings.
44-47	Dummy
48	Set NVM testbyte to 44h in NVM.
49	Erase NVM testbyte
50	No function.

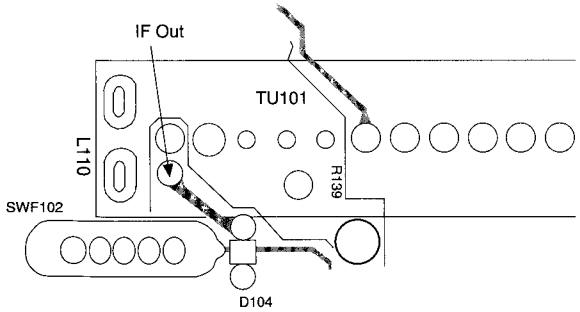
Note : For Test Modes 41 - 50, it is necessary to ensure that the TV is set to Prog 59.

IF ADJUSTMENT (AUTOMATIC)

1. Input a 38.9 MHz 100dBμ CW signal at the IF Out injection point.
2. Enter into service mode and press 34.
3. Connect a digital voltmeter to IC101 pin (23).
4. Check AFT 2.5V ±0.3V dc.
5. Press '00' on the Remote Commander.

SYSTEM L ADJUSTMENT (Italian, French, AEP, Spanish Models)

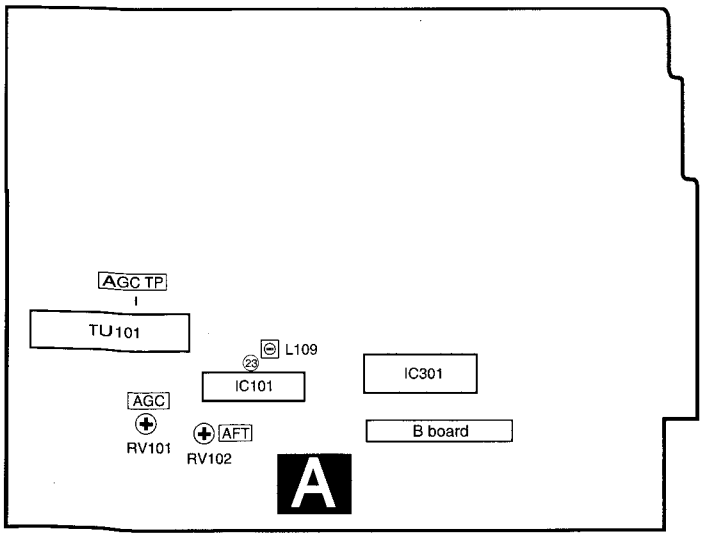
1. Input a 33.9MHz 100dBμ CW signal at the IF Out injection point.
2. From the On Screen Menu set System to L band 1.
3. Connect a digital voltmeter to IC101 pin (23).
4. Adjust RV102 AFT for 2.5V ±0.3V dc.



- A Board Print Side -

AGC ADJUSTMENT

1. Receive an off-air signal.
2. Enter into the Service adjust menu and select AGC.
3. Adjust the data using the Red and Yellow buttons on the Remote Commander so that there is no snow or cross - modulation visible on the screen.
4. Change the receiving off-air channel, and confirm the above status.



- A Board Component Side -

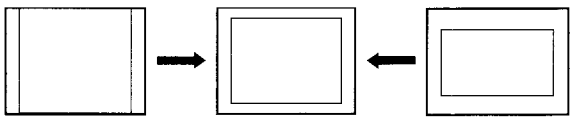
DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the service mode.
2. Using the Blue or Green buttons select the Adjust item.
3. Press the Yellow button to enter the adjustment submenu.
4. Select and adjust each item in order to obtain the optimum image.

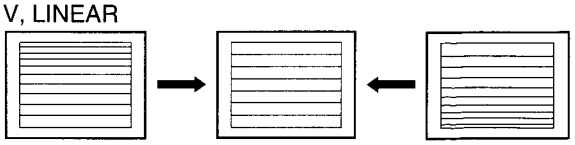
See Note on page 23

Adjustment	Set	Range
VERT, AMPL	Adj.	00 - 63
VER, BREATH	00	00 - 63
PAR, AMPL	00	00 - 63
PAR, TILT	32	00 - 63
V, LINEAR	Adj.	00 - 63
CORN, CORR	Adj.	00 - 63
V, CENTRE	Adj.	00 - 63
V, POSITION	42	00 - 63
H, CENTRE	Adj.	00 - 63

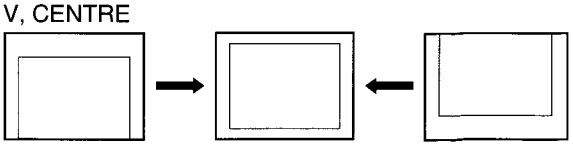
VERT, AMPL



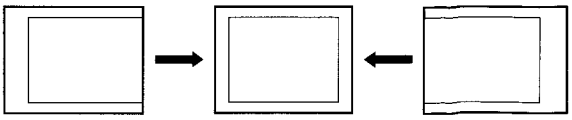
V, LINEAR



V, CENTRE



H, CENTRE



Fit the link as required to obtain the correct horizontal picture size.

4-3. BE-4A SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-4A chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to I^2C. In the event of one of these situations arising the software will first try to release the Bus if busy (Failure to do so will report with a continuous flashing LED) and then communicate with each relevant device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the LED by a Series of flashes which must be counted (See Table 1), Non fatal errors are reported with this method.

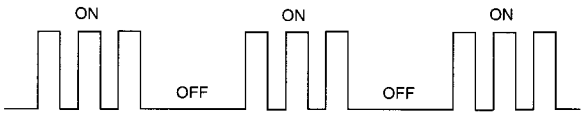
If a fatal error is found, the set will simply stay in whichever state it was when the error occurred, but if a non fatal error occurs the set will try to continue to operate.

Table 1

No of Flashes	Meaning
2	IC301 not acknowledging I²C transmission, NVM OK.
3	IC301 FAULT (Not OK) - flags
4	IC301 - No H Flyback
5	IC301 - Stack Overflow.
6	Overvoltage / Overcurrent Protection (Pin 52) high.
7	IC002 not acknowledging I²C transmission, IC301 OK.
8	IC002 and IC301 - No I²C acknowledgment.
9	General I²C Error (SDA or SCL being held low) (IC301, IC001, IC002, CN001)

Flash Timing Example : e.g. error number 3

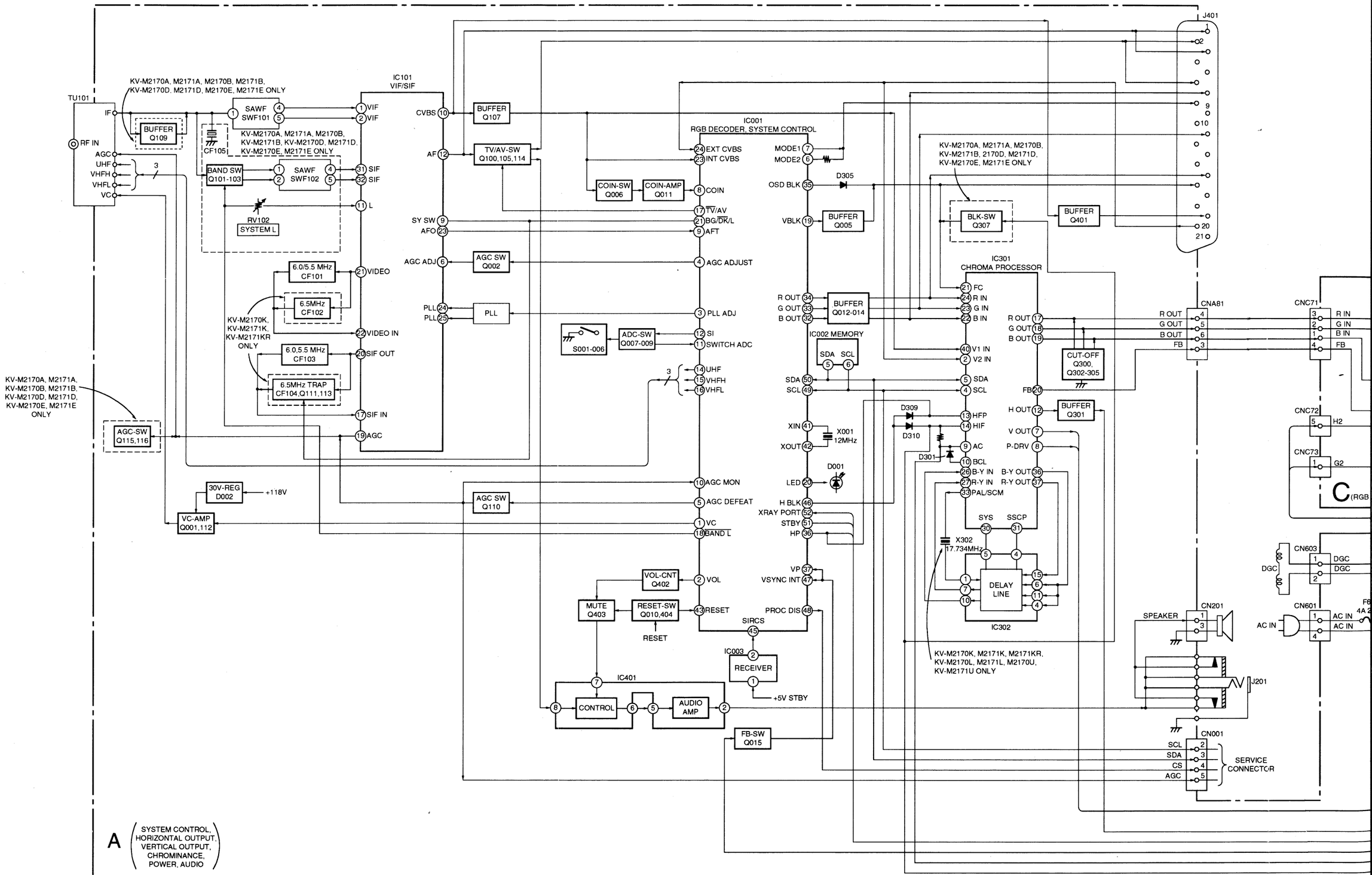
Stby LED

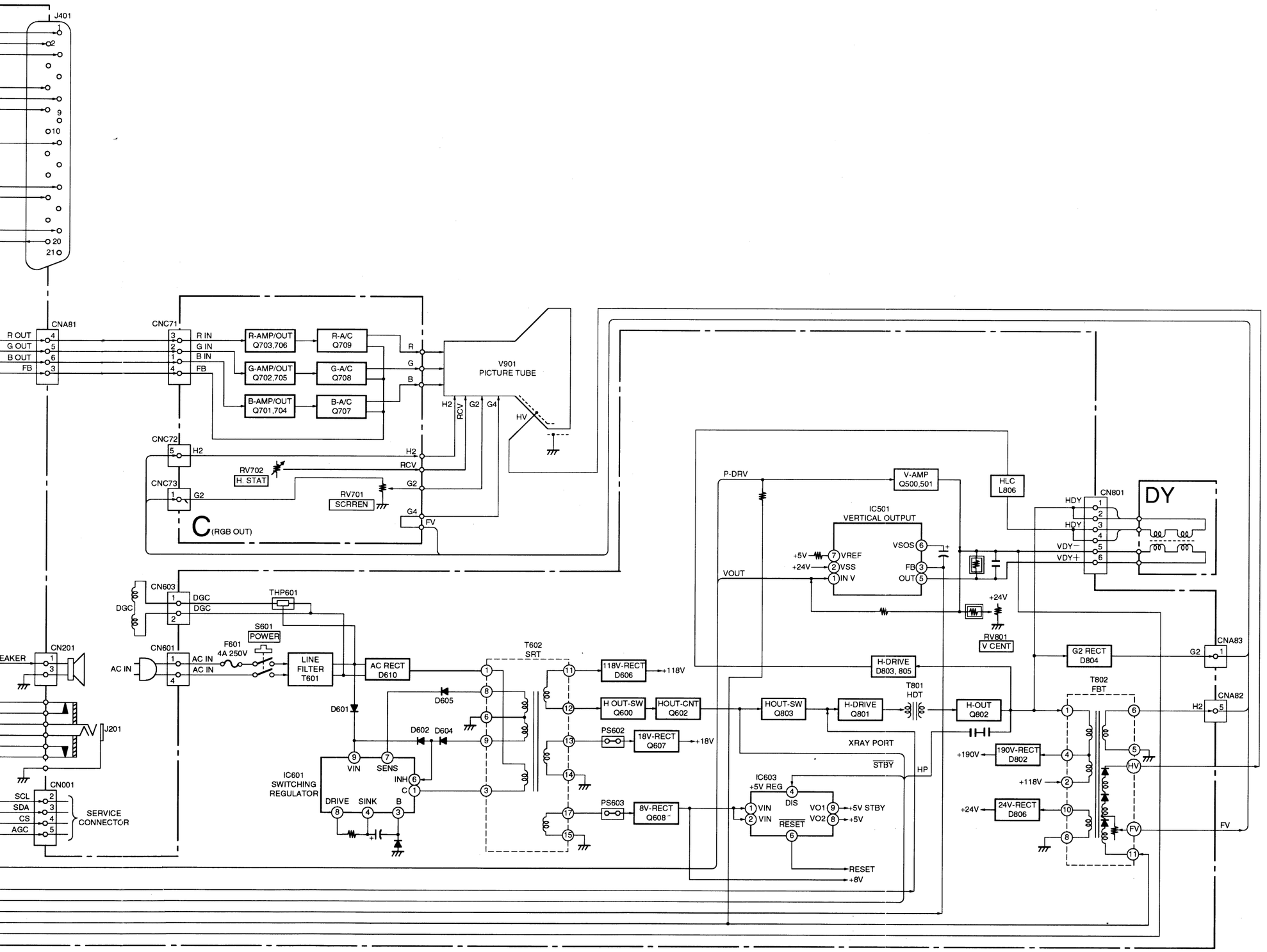


Note : Deflection System Adjustments should not be carried out whilst using an NTSC (60Hz) signal, or if the signal is unlocked.

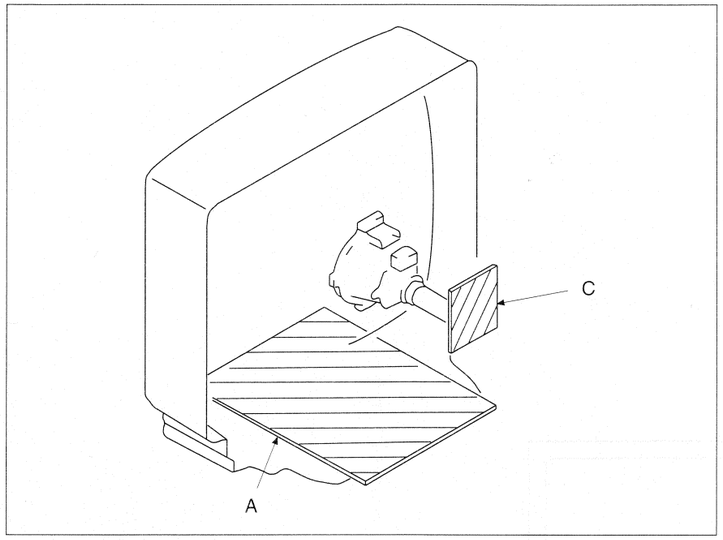
SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM




J401
CNA81
R OUT
G OUT
B OUT
FB
CNC71
R IN
G IN
B IN
FB
R-AMP/OUT Q703,706
G-AMP/OUT Q702,705
B-AMP/OUT Q701,704
R-A/C Q709
G-A/C Q708
B-A/C Q707
V901 PICTURE TUBE
CNC72
H2
RV702 H. STAT
CNC73
G2
RV701 SCRREN
G4
FV
RCV
C (RGB OUT)
CN603
DGC
THP601
S601 POWER
F601 4A 250V
CN601
AC IN
LINE FILTER T601
AC RECT D610
D601
D605
D602 D604
IC601 SWITCHING REGULATOR
VIN
SENS
INH
DRIVE
SINK
T602 SRT
118V-RECT D606
+118V
H OUT-SW Q600
HOUT-CNT Q602
PS602
18V-RECT Q607
+18V
PS603
8V-RECT Q608
CN201
SPEAKER
J201
CN001
SCL
SDA
CS
AGC
SERVICE CONNECTOR
P-DRV
V-AMP Q500,501
IC501 VERTICAL OUTPUT
VREF
VSS
IN V
VSOS
FB
OUT
VOUT
+5V
+24V
HLC L806
CN801
HDY
VDY−
VDY+
DY
RV801 V CENT
H-DRIVE D803, 805
HOUT-SW Q803
H-DRIVE Q801
T801 HDT
H-OUT Q802
G2 RECT D804
T802 FBT
190V-RECT D802
+190V
24V-RECT D806
+24V
HV
CNA83
CNA82
XRAY PORT
STBY
HP
IC603 +5V REG
DIS
RESET
VO1
VO2
+5V STBY
+5V
RESET
+8V

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm
Rating electrical power ¼ W

- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth - ground.
- : earth - chassis.
- : no mounted.

Note : The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

Note : Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	:	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- : B+ bus.
- : signal path. (RF)

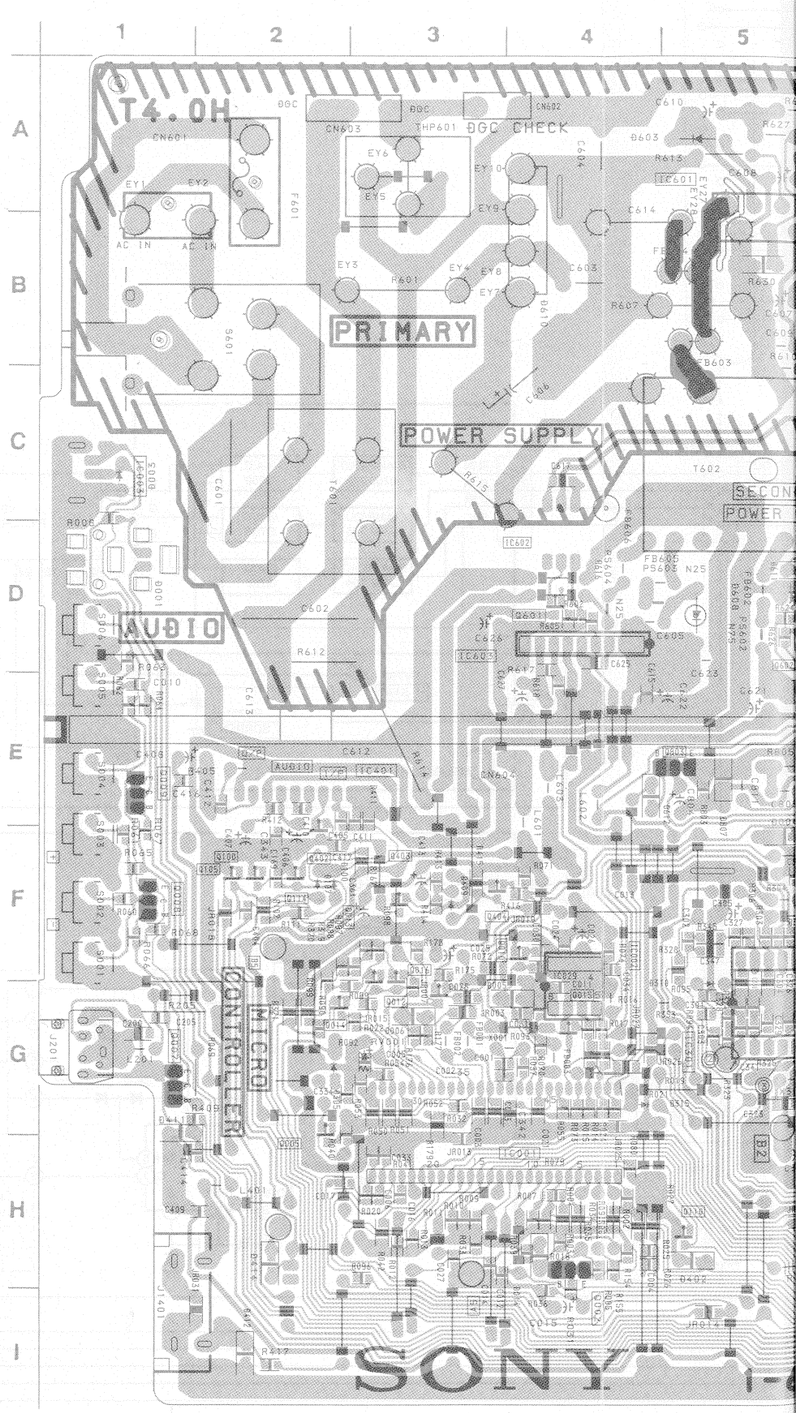
A SYSTEM CONTROL, HORIZONTAL OUTPUT, VERTICAL OUTPUT, CHROMINANCE, POWER, AUDIO

— A BOARD —

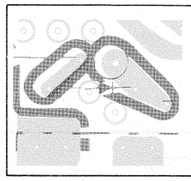
IC		TRANSISTOR						DIODE				VARIABLE RESISTOR	
IC001	H-4	Q001	H-8	Q114	F-2	Q305	G-2	D001	D-1	D305	G-2	RV102	H-10
IC002	G-4	Q002	I-4	○ Q115	F-10	○ D307	G-11	D002	F-8	D307	G-11	RV801	E-9
IC003	C-1	Q005	H-2	○ Q116	F-9	○ D308	F-8	D004	F-5	D308	F-8		
IC101	G-10	Q006	H-9	Q300	F-7	D401	H-12	D005	G-4	D401	H-12		
IC301	G-5	Q007	G-1	Q301	F-6	D402	H-5	D006	G-3	D402	H-5		
IC302	H-7	Q008	F-1	Q302	F-7	D403	H-12	D014	I-4	D403	H-12		
IC401	E-3	Q009	E-1	Q303	G-7	D404	H-12	D100	F-3	D404	H-12		
IC501	D-9	Q010	F-4	Q304	F-7	D405	H-12	○ D102	G-11	D405	H-12		
IC601	A-5	Q011	H-8	Q305	G-7	D406	H-11	○ D104	G-11	D406	H-11		
IC603	D-3	Q012	G-3	Q306	G-8	D407	G-12	● D105	F-8	D407	G-12		
		Q013	F-3	○ Q307	F-8	D408	I-12	● D106	F-8	D408	I-12		
		Q014	G-2	Q401	H-10	D409	F-3	D107	F-2	D409	F-3		
		Q015	G-4	Q402	F-2	D410	I-11	D109	F-9	D410	I-11		
		Q016	F-3	Q403	F-3	D414	H-2	D301	F-6	D414	H-2		
		Q100	F-2	Q404	F-4	D501	E-8	D302	F-7	D501	E-8		
		○ Q101	G-11	Q600	D-6	D600	D-6			D600	D-6		
		○ Q102	G-11	Q602	D-6	D601	A-6			D601	A-6		
		○ Q103	G-11	Q801	E-6	D602	B-6			D602	B-6		
		Q105	F-2	Q802	C-9	D603	A-5			D603	A-5		
		Q107	H-9	Q803	E-5	D604	B-6			D604	B-6		
		○ Q109	G-10	Q804	C-7	D605	B-6			D605	B-6		
		Q110	H-5	Q805	B-7	D606	D-6			D606	D-6		
		● Q111	G-8			D607	E-6			D607	E-6		
		Q112	G-12			D608	D-5			D608	D-5		
		● Q113	G-9			D610	B-4			D610	B-4		
						D611	D-6			D611	D-6		
						D612	E-5			D612	E-5		
						D801	E-7			D801	E-7		
						D802	A-8			D802	A-8		
						D803	C-11			D803	C-11		
						D804	B-10			D804	B-10		
						D805	C-10			D805	C-10		
						D806	A-11			D806	A-11		
						D807	E-5			D807	E-5		

○ Mark : KV-M2170A, M2171A, M2170B, M2171B, M2170D, M2171D, M2170E, 2171E ONLY
● Mark : KV-M2170K, M2171K, M2171KR ONLY

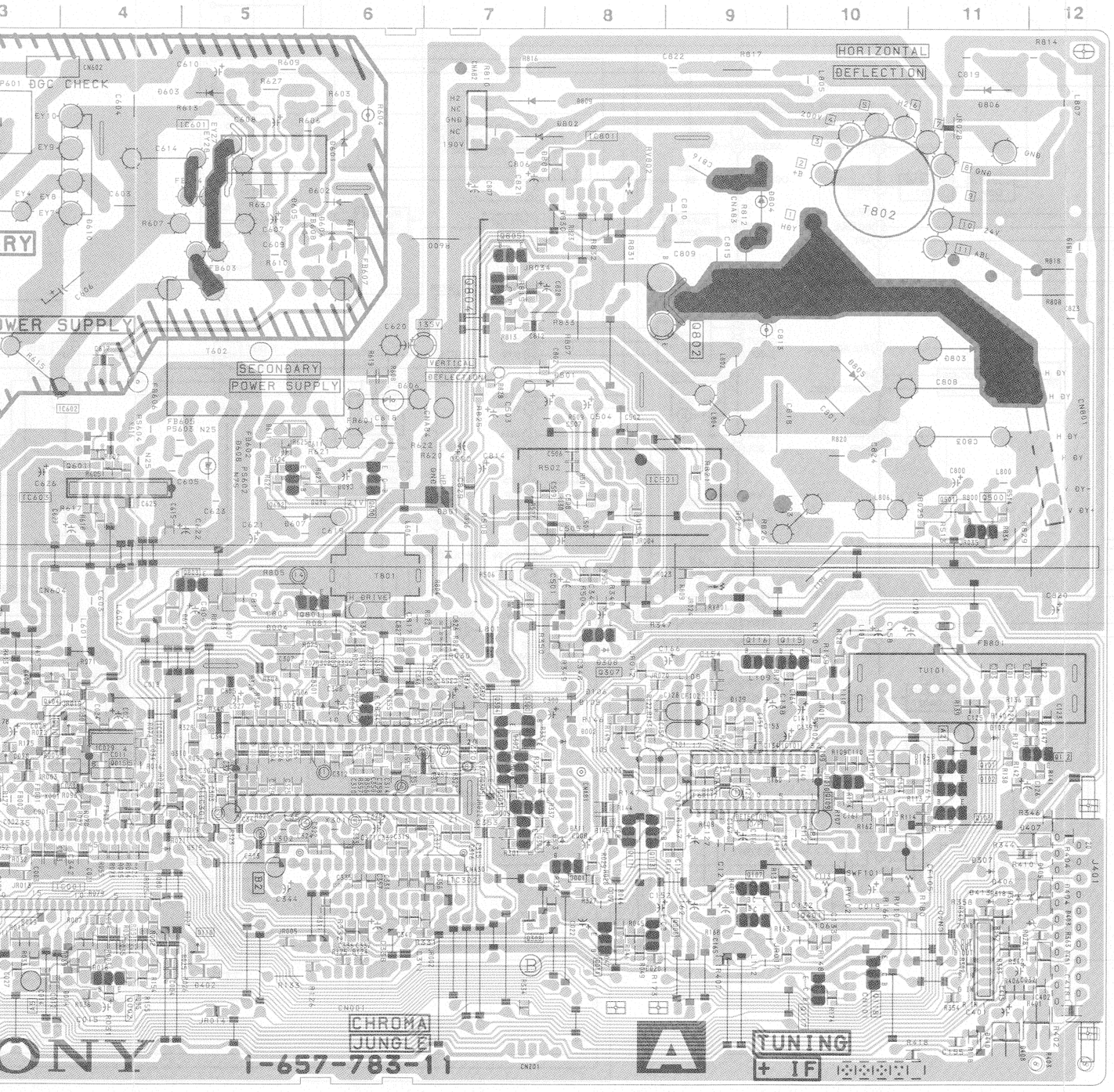
— A BOARD —



UTPUT,



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

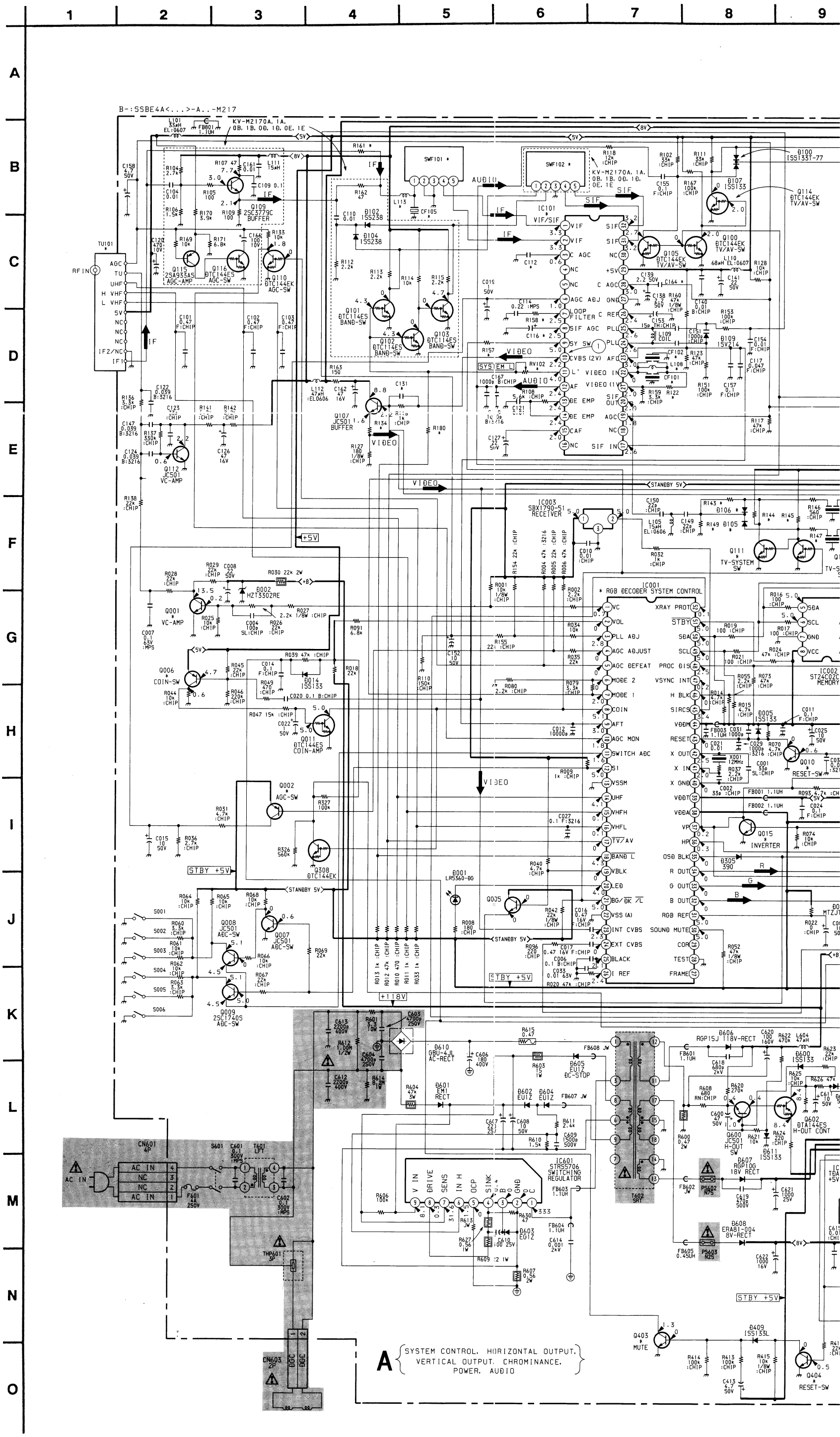


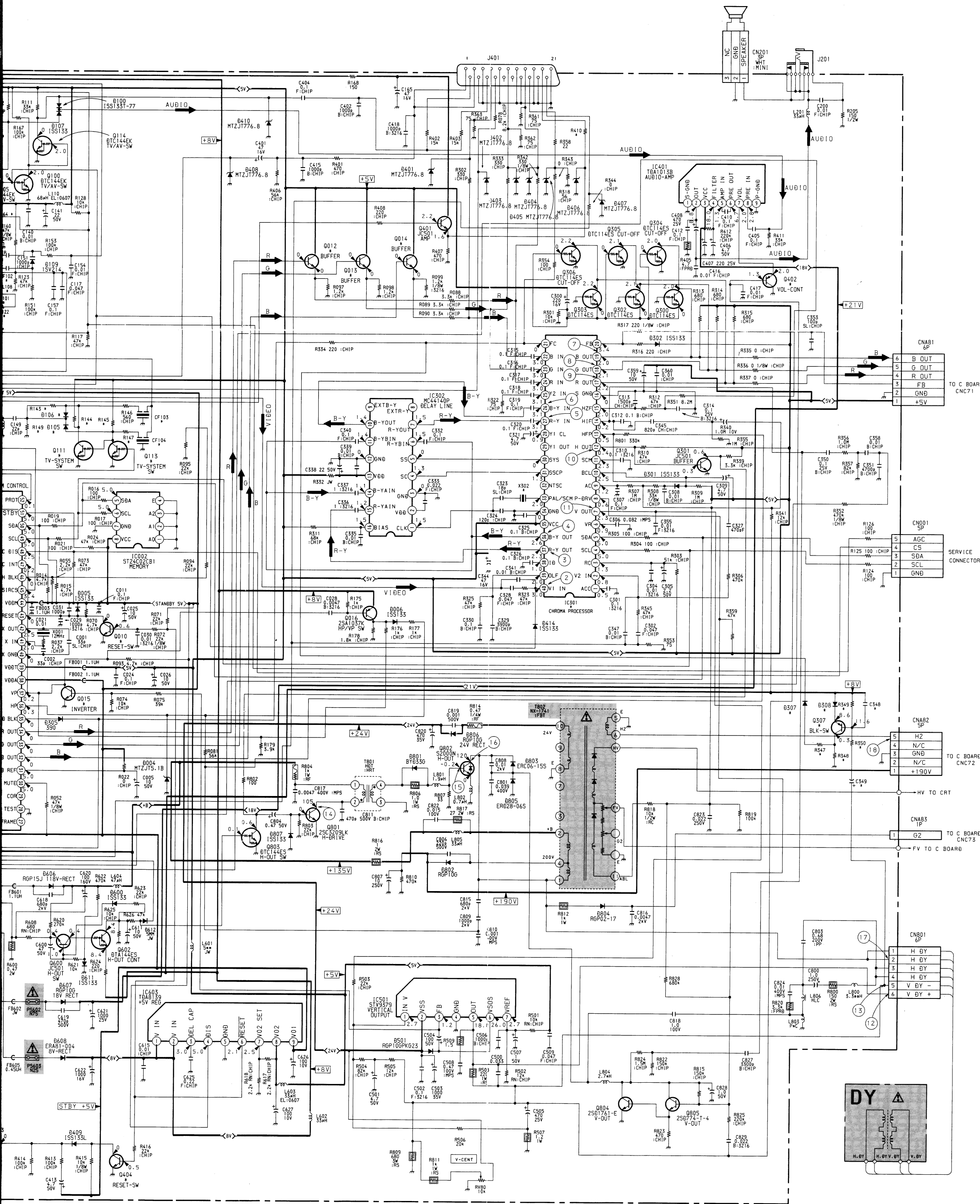
A BOARD * MARK

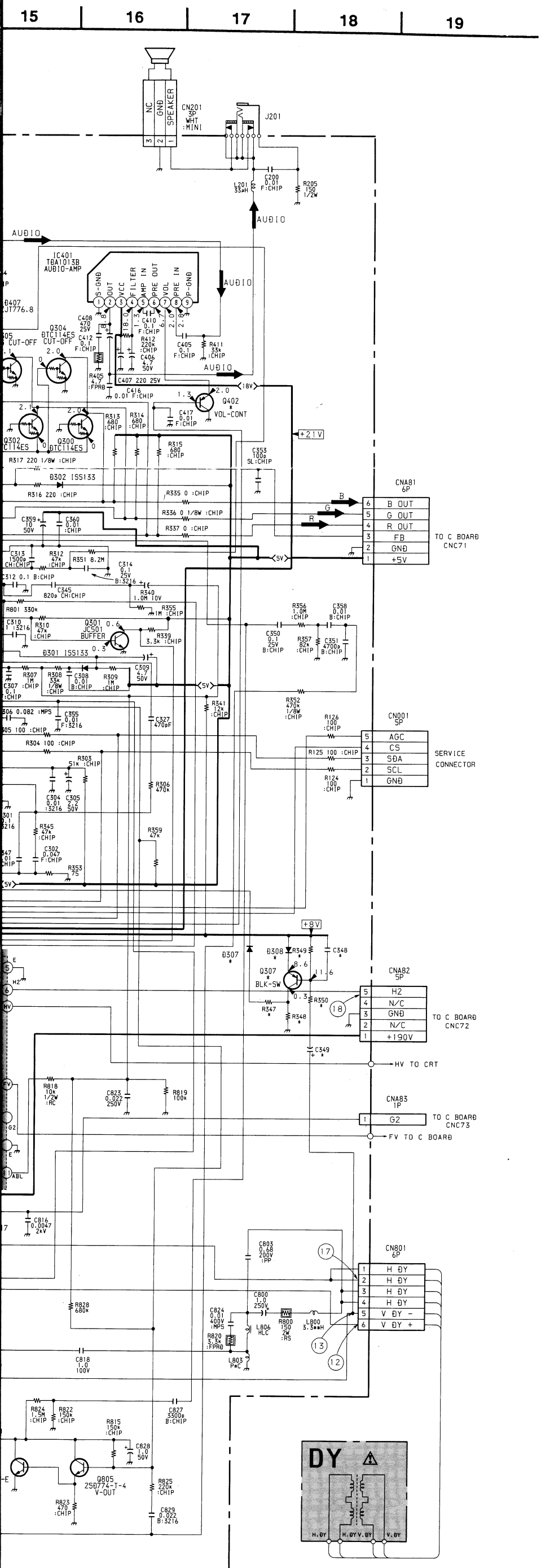
Ref. No. \ Model	M2170A M2171A	M2170B M2171B	M2170D M2171D	M2170E M2171E	M2170K M2171K	M2171KR	M2170L M2171L	M2170U M2171U
C112	0.1	0.1	0.1	0.1	–	–	–	–
C116	2.2 50V	2.2 50V	2.2 50V	2.2 50V	–	–	–	–
C131	–	–	–	–	0.001	0.001	–	–
C164	1	1	1	1	–	–	–	–
C348	0.01	0.01	0.01	0.01	–	–	–	–
C349	22 50V	22 50V	22 50V	22 50V	–	–	–	–
CF101	5.5 / 5.74MHz	5.5 / 6.5MHz	5.5 / 5.74MHz	5.5 / 5.74MHz	5.5 / 5.74MHz	5.5 / 5.74MHz	6.0 / 6.5MHz	6.0 / 6.5MHz
CF102	–	–	–	–	6.5MHz	6.5MHz	–	–
CF103	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	6.0MHz	6.0MHz
CF104	–	–	–	–	6.5MHz	6.5MHz	–	–
CF105	5.5MHz	5.5MHz	5.5MHz	5.5MHz	–	–	–	–
D105	–	–	–	–	1SS133	1SS133	–	–
D106	–	–	–	–	1SS133	1SS133	–	–
D307	1SS133	1SS133	1SS133	1SS133	–	–	–	–
D308	1SS133	1SS133	1SS133	1SS133	–	–	–	–
FB801	–	–	–	–	1.1µH	1.1µH	1.1µH	1.1µH
IC001	Refer to "A board * mark-2" table							
IC101	TDA9806	TDA9812	TDA9806	TDA9806	TDA9806	TDA9806	TDA9806	TDA9806
IC301	MC44007P	MC44002P	MC44002P	MC44007P	MC44002P	MC44002P	MC44007P	MC44007P
L108	8.2µH	8.2µH	8.2µH	8.2µH	4.7µH	4.7µH	8.2µH	8.2µH
L113	0.22µH	0.22µH	0.22µH	0.22µH	0.22µH	0.22µH	0.22µH	0 : CHIP
Q001	JC501	JC501	JC501	JC501	2SC2410S	2SC2410S	2SC2410S	2SC2410S
Q002	JA101	JA101	JA101	JA101	2SC933AS	2SC933AS	2SC933AS	2SC933AS
Q005	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q006	JA101	JA101	JA101	JA101	2SC933AS	2SC933AS	2SC933AS	2SC933AS
Q010	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q012	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q013	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q014	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q015	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q111	–	–	–	–	DTC144ES	DTC144ES	–	–
Q113	–	–	–	–	DTC144ES	DTC144ES	–	–
Q307	2SA933AS	2SA933AS	2SA933AS	2SA933AS	–	–	–	–
Q402	JA101	JA101	JA101	JA101	2SC933AS	2SC933AS	2SC933AS	2SC933AS
Q403	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q404	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
R122	150	150	150	150	100	100	150	150
R134	180	180	180	180	180	180	150	150
R143	0	0	0	0	–	–	0	0
R144	–	–	–	–	2.2K	2.2K	–	–
R145	–	–	–	–	2.2K	2.2K	–	–
R147	–	–	–	–	560	560	–	–
R149	–	–	–	–	2.2K	2.2K	–	–
R157	1K	1K	1K	1K	–	–	–	–
R158	180	180	180	180	390	390	390	390
R161	0	–	0	0	0	0	0	0
R180	1K	1K	1K	1K	–	–	–	–
R347	470	470	470	470	–	–	–	–
R348	10K	10K	10K	10K	–	–	–	–
R349	220K	220K	220K	220K	–	–	–	–
R350	220	220	220	220	–	–	–	–
R355	39µF 10V	39µF 10V	39µF 10V	39µF 10V	47K	47K	47K	47K
R358	47K	47K	47K	47K	39µF 10V	39µF 10V	39µF 10V	39µF 10V
R410	75	75	75	75	75	75	68	68
RV102	22K	22K	22K	22K	–	–	–	–
SWF101	OPWG1963	OFWK3953	OPWG1963	OPWG1963	OFWK2950	OFWK2950	OFWJ1952M	OFWJ1952M
TU101	TELE1X001A	BT-AC401	BT-AC401	BT-AC401	BT-AC401	BT-AC401	BT-AC401	BT-AC401
X302	–	–	–	–	17.472MHz	17.472MHz	17.472MHz	17.472MHz

A BOARD * MARK-2 (IC001)

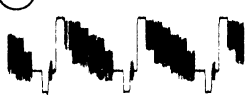
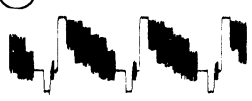
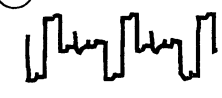
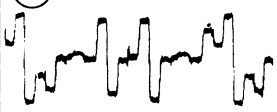
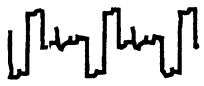
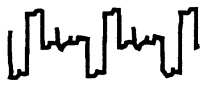
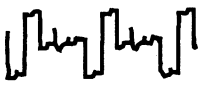
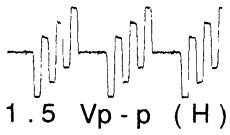
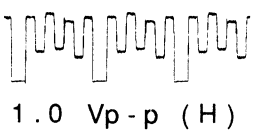
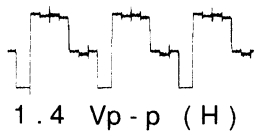
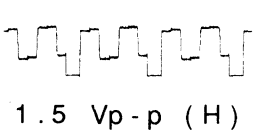
KV-M2170A/M2170B/M2170D/M2170E/M2170K/M2170L/M2170U	SAA5288ZP/007
KV-M2171A/M2171B/M2171D/M2171E/M2171K/M2171L/M2171U	SAA5290ZP/007
KV-M2171KR	SAA5290ZP/006


B-:SSBE4A<...>-A..-M217
KV-M2170A, 1A, 0B, 1B, 0D, 1D, 0E, 1E
SYSTEM L
IC101 VIF/SIF
IC001 * RGB DECODER SYSTEM CONTROL
IC003 SBX1790-51 RECEIVER
IC002 ST24C02C MEMORY
IC601 STRS5706 SWITCHING REGULATOR
TU101
RF IN
SWF101 *
SWF102 *
Q109 2SC3779C BUFFER
Q115 2SA933AS AGC-AMP
Q116 DTC144ES AGC-SW
Q110 DTC144EK AGC-SW
Q101 DTC114ES BAND-SW
Q102 DTC114ES BAND-SW
Q103 DTC114ES BAND-SW
Q107 JC501 BUFFER
Q112 JC501 VC-AMP
Q001 * VC-AMP
Q006 * COIN-SW
Q011 DTC144ES COIN-AMP
Q002 * AGC-SW
Q308 DTC144EK
Q008 JC501 ADC-SW
Q007 JC501 ADC-SW
Q009 2SC1740S ADC-SW
Q005
Q111 * TV-SYSTEM SW
Q100 DTC144EK TV/AV-SW
Q105 DTC144EK TV/AV-SW
Q010 * RESET-SW
Q015 * INVERTER
Q403 * MUTE
Q404 * RESET-SW
Q600 JC501 H-OUT SW
Q602 DTA144ES H-OUT CONT
D100 1SS133T-77
D107 1SS133
D102 1SS238
D104 1SS238
D014 1SS133
D001 LR5360-0G
D005 1SS133
D109 1SV214
D306 390
D606 RGP15J 118V-RECT
D610 GBU-4JL AC-RECT
D601 EM1 RECT
D602 EU1Z
D604 EU1Z
D605 EU1Z DC-STOP
D607 RGP10G 18V RECT
D608 ERA81-004 8V-RECT
D611 1SS133
D409 1SS133L
CF105 *
CF101 *
CF102 *
L101 33uH EL:0607
L112 47uH :EL0606
L113 *
L105 15uH EL:0606
L110 68uH EL:0607
L109 COIL
T601 LFT
T602 SRT
X001 12MHz
THP601 3P
CN601 4P
CN603 2P
AC IN
F601 4A 250V
S601
S001
S002
S003
S004
S005
S006
STBY +5V
STANDBY 5V
+118V
VIDEO
AUDIO
IF
SIF
A { SYSTEM CONTROL, HORIZONTAL OUTPUT, VERTICAL OUTPUT, CHROMINANCE, POWER, AUDIO }

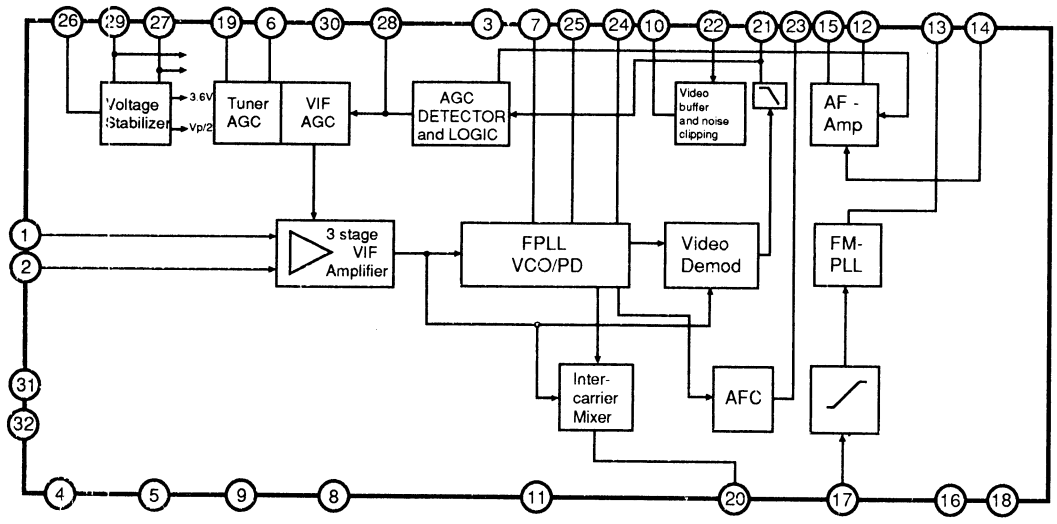

J401
CN201 3P WHT :MINI
NC
GND
SPEAKER
J201
L201 33µH
C200 0.01 F:CHIP
R205 150 1/2W
AUDIO
IC401 TBA1013B AUDIO-AMP
S-GND
OUT
VCC
FILTER
AMP IN
PRE OUT
VOL
PRE IN
P-GND
Q100 DTC144EK TV/AV-SW
Q114 DTC144EK TV/AV-SW
Q107 2SS133
D100 1SS133T-77
D109 1SV214
L110 68µH EL:0607
Q401 JC501 AMP
Q012 BUFFER
Q013 BUFFER
Q014 BUFFER
Q305 DTC114ES CUT-OFF
Q304 DTC114ES CUT-OFF
Q306 DTC114ES CUT-OFF
Q303 DTC114ES
Q302 DTC114ES
Q300 DTC114ES
Q402 VOL-CONT
Q301 JC501 BUFFER
D302 1SS133
D301 1SS133
D303 MTZJT776.8
D404 MTZJT776.8
D405 MTZJT776.8
D406 MTZJT776.8
D407 MTZJT776.8
D408 MTZJT776.8
D410 MTZJT776.8
D401 MTZJT776.8
IC302 MC44140P DELAY LINE
EXTB-Y
EXTR-Y
B-YOUT
R-YOUT
B-YBIN
R-YBIN
GND
VDD
B-YAIN
R-YAIN
BIAS
SS
SC
CLK
IC301 CHROMA PROCESSOR
FC
FB
B IN
B OUT
G IN
G OUT
R IN
R OUT
S GND
Y2 IN
B-Y IN
HZF
R-Y IN
HIF
Y1 CL
HFP
Y1 OUT
H OUT
SYS
SCM
SSCP
BCL
NTSC
AC
PAL/SCM
P-DRV
GND
V OUT
VCC
B-Y OUT
SDA
R-Y OUT
SCL
ID
RC
OLF
V2 IN
VI IN
ACC
X302
CNA81 6P
B OUT
G OUT
R OUT
FB
GND
+5V
TO C BOARD CNC71
CN001 5P
AGC
CS
SDA
SCL
GND
SERVICE CONNECTOR
IC002 ST24C02CB1 MEMORY
IC603 TDA8139 +5V REG
Q111 TV-SYSTEM SW
Q113 TV-SYSTEM SW
Q015 INVERTER
Q010 RESET-SW
Q016 25A1037K HP/VP SW
Q404 RESET-SW
D005 1SS133
D006 1SS133
D414 1SS133
D307
D308
Q307 BLK-SW
CNA82 5P
H2
N/C
GND
N/C
+190V
TO C BOARD CNC72
HV TO CRT
CNA83 1P
G2
TO C BOARD CNC73
FV TO C BOARD
T802 NX-1741 :FBT
D806 RGP10G 24V RECT
Q802 2S000N H-OUT
D801 BYD33G
D803 ERC06-15S
D805 ERD28-06S
Q801 2SC3209LK H-DRIVE
Q803 DTC144ES H-OUT SW
D807 1SS133
D606 RGP15J 118V-RECT
D607 RGP10G 18V RECT
D608 ERA81-004 8V-RECT
D609 1SS133L
D600 1SS133
D611 1SS133
D612 5MM JW
Q600 JC501 H-OUT SW
Q602 DTA144ES H-OUT CONT
D604 MTZJT5.1B
D305 390
D501 RGP10GPKG23
IC501 STV9379 VERTICAL OUTPUT
D802 RGP10G
D804 RGP02-17
Q804 2SD1761-E V-OUT
Q805 2SD774-T-4 V-OUT
CN801 6P
H DY
H DY
H DY
H DY
V DY -
V DY +
DY
H.DY
H.DY V.DY
V.DY
V-CENT
RV801 10k
+5V
+8V
+21V
+24V
+135V
+190V
+B
8V
18V
21V
STBY +5V
STANDBY 5V
VIDEO
B-Y
R-Y



WAVEFORMS A BOARD

①  2.0 Vp-p (H)	②  1.0 Vp-p (H)	③  1.0 Vp-p (H)	④ PAL  1.0 Vp-p (H)
⑤ PAL  1.0 Vp-p (H)	⑤ SECAM  0.5 Vp-p (H)	⑤ NTSC  1.1 Vp-p (H)	⑥ PAL 1.4 Vp-p (H)
⑥ NTSC  1.5 Vp-p (H)	⑦  1.0 Vp-p (H)	⑧  1.4 Vp-p (H)	⑨  1.5 Vp-p (H)
⑪ 1.8 Vp-p (V)	⑫ 55 Vp-p (V)	⑬ 7.3 Vp-p (V)	⑭ 220 Vp-p (H)
⑯ 1.4KVp-p (H)	⑰ 51 Vp-p (H)	⑱ 24 Vp-p (H)	

A BOARD IC101 TDA9806/TDA9812

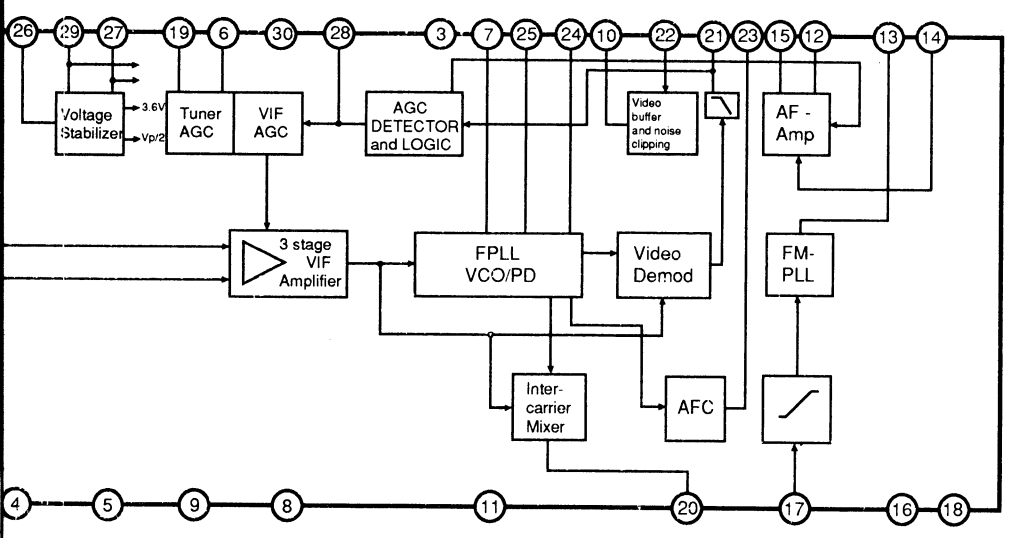


A BOARD IC301 MC44002P/MC44007P

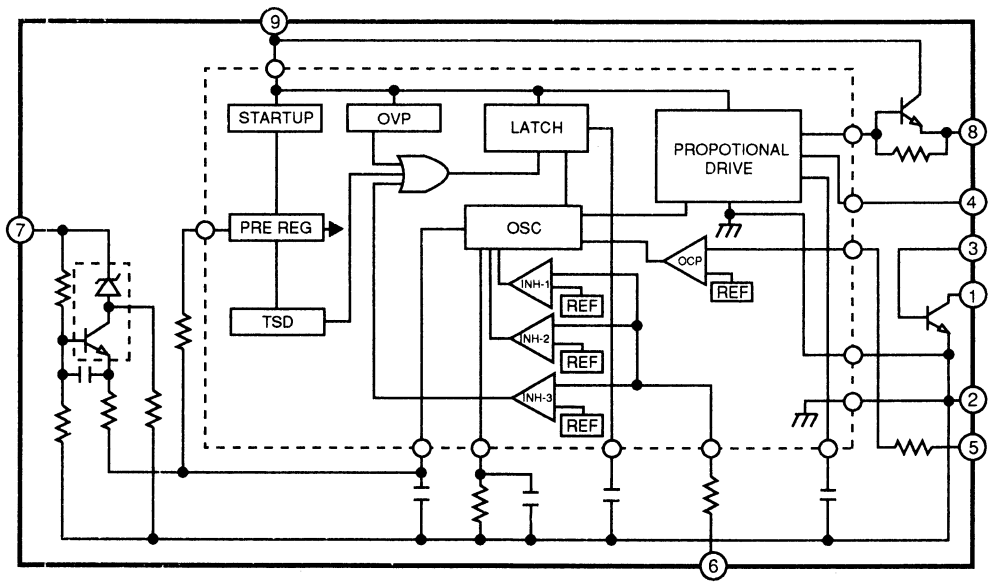
WAVEFORMS A BOARD

① 2.0 Vp-p (H)	② 1.0 Vp-p (H)	③ 1.0 Vp-p (H)	④ PAL 1.0 Vp-p (H)	④ SECAM/NTSC 1.2 Vp-p (H)
⑤ PAL 1.0 Vp-p (H)	⑤ SECAM 0.5 Vp-p (H)	⑤ NTSC 1.1 Vp-p (H)	⑥ PAL 1.4 Vp-p (H)	⑥ SECAM 0.7 Vp-p (H)
⑥ NTSC 1.5 Vp-p (H)	⑦ 1.0 Vp-p (H)	⑧ 1.4 Vp-p (H)	⑨ 1.5 Vp-p (H)	⑩ 0.8 Vp-p (H)
⑪ 1.8 Vp-p (V)	⑫ 55 Vp-p (V)	⑬ 7.3 Vp-p (V)	⑭ 220 Vp-p (H)	⑮ 10 Vp-p (H)
⑯ 1.4KVp-p (H)	⑰ 51 Vp-p (H)	⑱ 24 Vp-p (H)		

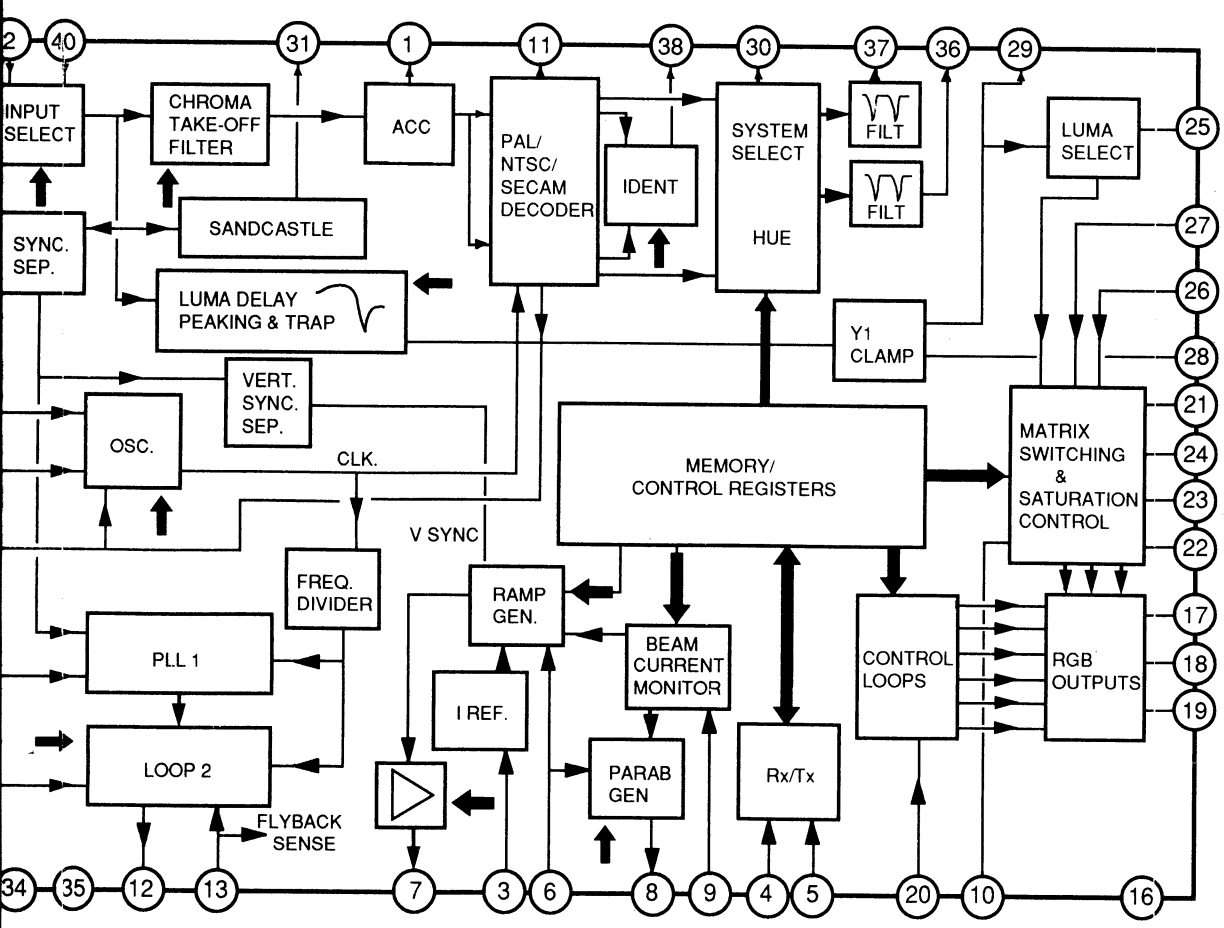
BOARD IC101 TDA9806/TDA9812



A BOARD IC601 STRS5706

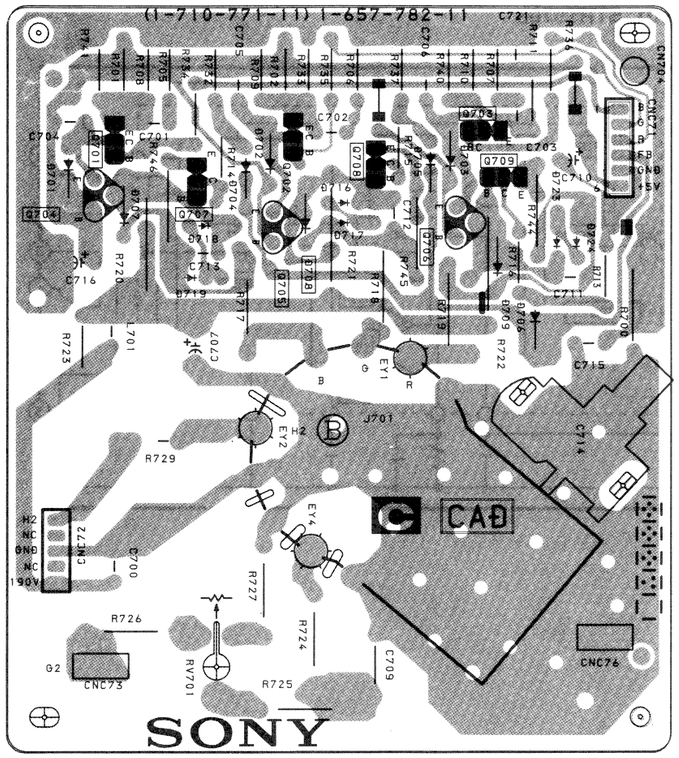


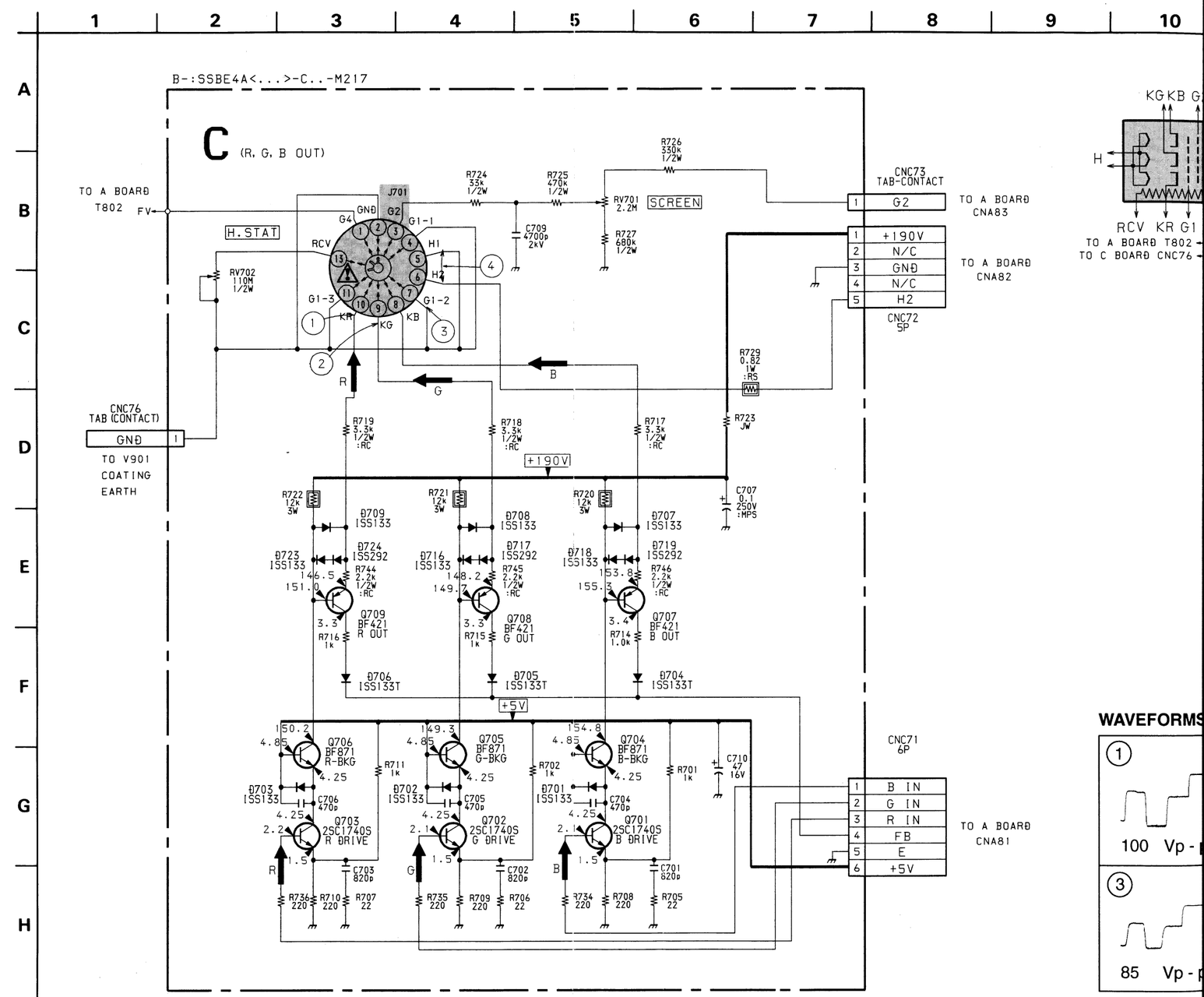
BOARD IC301 MC44002P/MC44007P

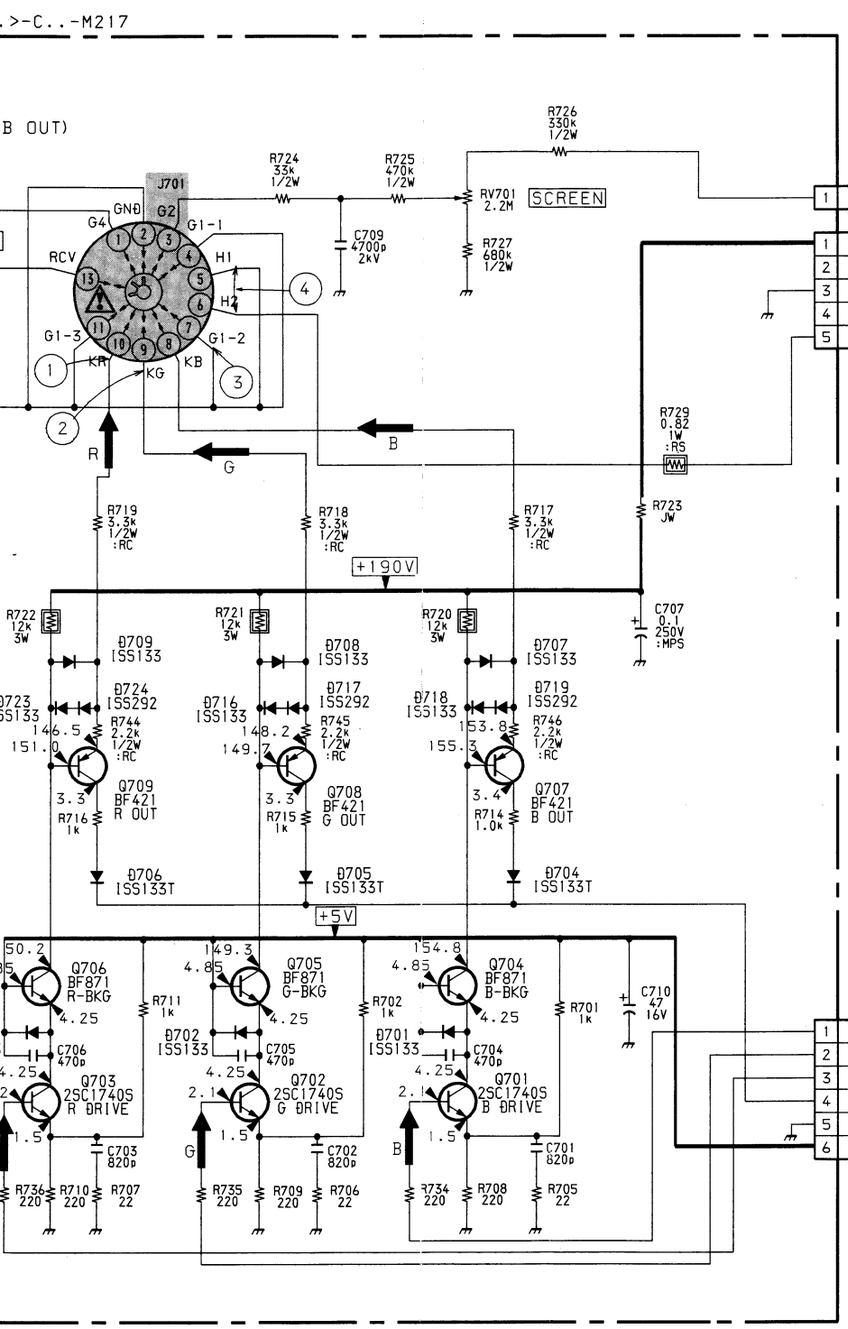


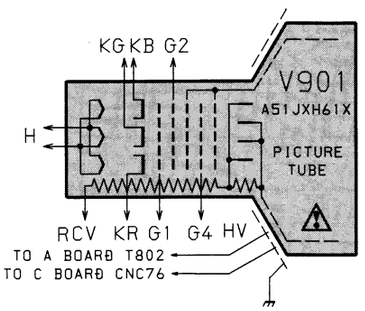
C [R.G.B OUT]

— C BOARD —

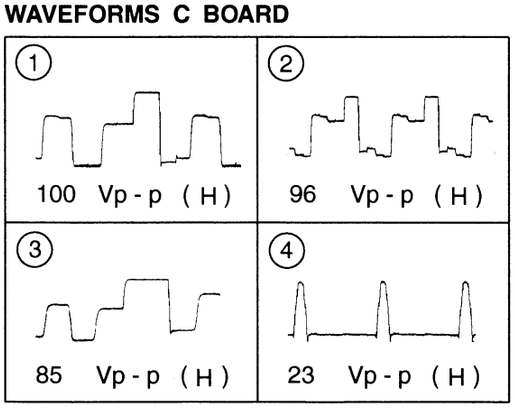








WAVEFORMS C BOARD

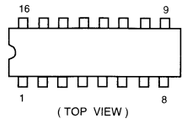


5-4. SEMICONDUCTORS

MC44002P
MC44007P

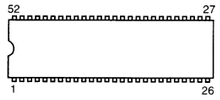
(TOP VIEW)

MC44140P



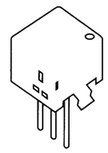
(TOP VIEW)

SAA5288ZP/007
SAA5290ZP/006
SAA5290ZP/007

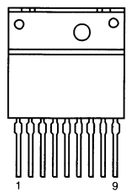


(TOP VIEW)

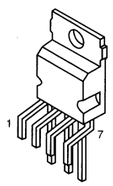
SBX1790-11
SBX1790-51



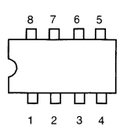
STR-S5706



STV9379

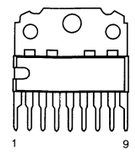


ST24C02CB1

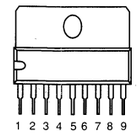


(TOP VIEW)

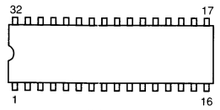
TDA1013B



TDA8139

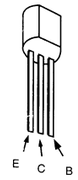


TDA9806
TDA9812

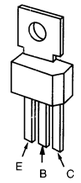


(TOP VIEW)

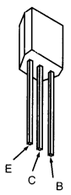
BF421
2SA1091-O



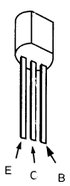
BF871



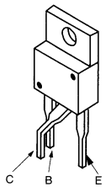
DTA144ES
DTC114ES
DTC144EK
DTC144ES



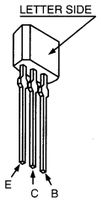
JA101-Q 2SA733-K
JC501-Q 2SC1740S
2SA1037K 2SC2785-HFE



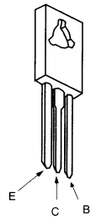
S2000N



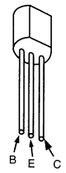
2SA933AS
2SA933S
2SA1175-HFE



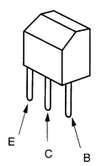
2SC2688-LK



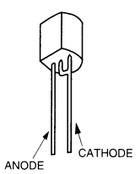
2SC3779C



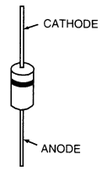
2SD774



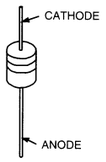
HZT33-02RE
UPC574J



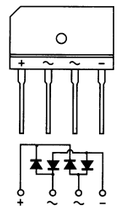
BYD33G ERD28-08S
EG-1Z-V1 EU-1Z
EGP20G RGP02-17EL-6433
EL1Z RGP02-17PKG23
EM1-V1 RGP10-GPKG23
ERC06-15S 1SS168
ERD28-06S 1SS238



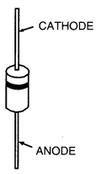
ERA81-004 RD5.1ESB2
ERA83-006 RD6.8ESB2
MTZJ-5.1B 1SS133
MTZJ-6.8A



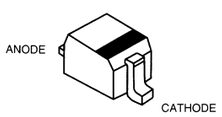
GBU4JL-6088



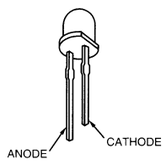
RGP15J-6040



1SV214



LR5360-DG



SECTION 6
EXPLODED VIEWS

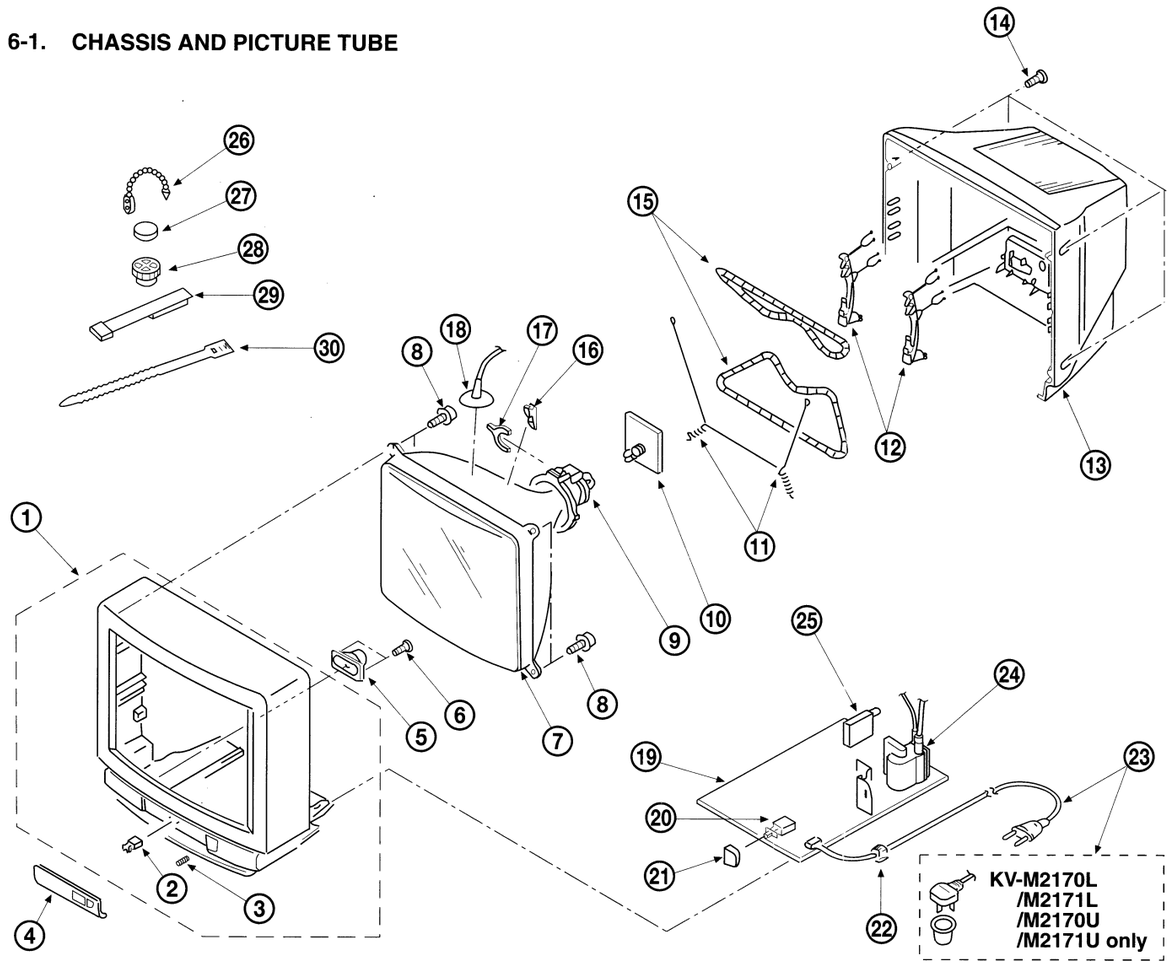
NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked ! are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ! sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

6-1. CHASSIS AND PICTURE TUBE



REF NO	PART NO	DESCRIPTION	REMARK
1	X-4200-229-2	BEZNET ASSY (KV-M2170A/M2171A/M2170B /M2171B/M2170D/M2171D/M2170E/M2171E)	
	X-4200-229-1	BEZNET ASSY (KV-M2170K/M2171K/M2171KR /M2170L/M2171L/M2170U/M2171U)	
2	4-392-036-01	CATCHER, PUSH	
3	4-387-829-11	SPRING	
4	4-203-120-31	DOOR, CONTROL (KV-M2170A/M2170B/M2170D/M2170E)	
	4-203-120-41	DOOR, CONTROL (KV-M2171A)	
	4-203-120-21	DOOR, CONTROL (KV-M2171B/M2171D/M2171E)	
	4-203-120-11	DOOR, CONTROL (KV-M2170K/M2170L/M2170U)	
	4-203-120-01	DOOR, CONTROL (KV-M2171K/M2171KR/M2171L/M2171U)	
5	1-503-258-21	SPEAKER	
6	4-039-356-01	SCREW (3x12), (+) BV TAPPING	
7	⚠ 8-738-784-05	PICTURE TUBE (SD-169) (A51JXH61X)	
8	4-036-189-01	SCREW (S), PT	
9	⚠ 8-451-295-45	DEFLECTION YOKE (Y21PF2BA)	
10	*A-1638-074-A	C BOARD, COMPLETE (KV-M2170A/M2171A/M2170B/M2171B /M2170D/M2171D/M2170E/M2171E)	
	*A-1638-068-A	C BOARD, COMPLETE (KV-M2170K/M2171K/M2171KR /M2170L/M2171L/M2170U/M2171U)	
11	4-369-318-21	SPRING, TENSION	

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF NO	PART NO	DESCRIPTION	REMARK
12	*4-386-622-11	BAND, DGC (KV-M2170A/M2171A/M2170B /M2171B/M2170D/M2171D/M2170E/M2171E)	
	*4-386-622-01	BAND, DGC (KV-M2170K/M2171K/M2171KR /M2170L/M2171L/M2170U/M2171U)	
13	4-200-732-01	COVER, REAR (KV-M2170A/M2171A/M2170B /M2171B/M2170D/M2171D/M2170E/M2171E)	
	4-200-673-01	COVER, REAR (KV-M2170K/M2171K/M2171KR /M2170L/M2171L/M2170U/M2171U)	
14	4-039-358-01	SCREW (4x16), (+) BV TAPPING	
15	⚠ 1-460-090-21	COIL, DEGAUSSING (KV-M2170A/M2170B/M2171D/M2170E/M2171E /M2170K/M2171K/M2171KR/M2170L/M2171L /M2170U/M2171U)	
	⚠ 1-626-145-00	COIL, DEGAUSSING (KV-M2171A/M2171B/M2170D)	
16	3-704-495-01	SPACER, DY	
17	1-452-277-00	MAGNET, BMC	
18	⚠ 1-540-006-12	CAP ASSY, HIGH-VOLTAGE (KV-M2170A/M2171A/M2170B/M2171B /M2170D/M2171D/M2170E/M2171E)	
	⚠ 1-540-007-11	CAP ASSY, HIGH-VOLTAGE (KV-M2170K/M2171K/M2171KR /M2170L/M2171L/M2170U/M2171U)	
19	*A-1632-310-A	A BOARD, COMPLETE (KV-M2170A)	
	*A-1632-309-A	A BOARD, COMPLETE (KV-M2171A)	
	*A-1632-314-A	A BOARD, COMPLETE (KV-M2170B)	
	*A-1632-315-A	A BOARD, COMPLETE (KV-M2171B)	
	*A-1632-308-A	A BOARD, COMPLETE (KV-M2170D)	
	*A-1632-307-A	A BOARD, COMPLETE (KV-M2171D)	
	*A-1632-313-A	A BOARD, COMPLETE (KV-M2170E)	
	*A-1632-311-A	A BOARD, COMPLETE (KV-M2171E)	
	*A-1632-306-A	A BOARD, COMPLETE (KV-M2170K)	
	*A-1632-304-A	A BOARD, COMPLETE (KV-M2171K)'	
	*A-1632-305-A	A BOARD, COMPLETE (KV-M2171KR)	
	*A-1632-303-A	A BOARD, COMPLETE (KV-M2170L)	
	*A-1632-302-A	A BOARD, COMPLETE (KV-M2171L)	
	*A-1632-301-A	A BOARD, COMPLETE (KV-M2170U)	
	*A-1632-300-A	A BOARD, COMPLETE (KV-M2171U)	
20	⚠ 1-571-433-21	SWITCH, PUSH (AC POWER)	
21	4-203-121-01	BUTTON, POWER (KV-M2170B/M2170K/M2171K /M2171KR/M2170L/M2171L/M2170U/M2171U)	
	4-203-121-11	BUTTON, POWER (KV-M2170A/M2171A/M2171B /M2170D/M2171D/M2170E/M2171E)	
22	4-389-201-01	HOLDER, AC CORD	
23	⚠ 1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-M2170A/M2171A/M2170B/M2171B /M2170D/M2171D/M2170E/M2171E)	
	⚠ 1-690-460-11	CORD, POWER (WITH CONNECTOR) 7.0A/250V (KV-M2170K/M2171K/M2171KR)	
	⚠ 1-690-762-11	CORD, POWER (WITH PLUG) 2.5A/250V (KV-M2170L/M2171L/M2170U/M2171U)	
24	⚠ 1-453-199-11	TRANSFORMER ASSY, FLYBACK (NX-1741/U2E)	

REF NO	PART NO	DESCRIPTION	REMARK
25	1-693-303-11	TUNER (TELE1X001A) (KV-M2170A/M2171A/M2171KR)	
	1-693-331-00	TUNER (BT-AC401) (KV-M2170B/M2171B /M2170D/M2171D/M2170E/M2171E)	
	1-693-310-11	TUNER (TELE4X002A) (KV-M2170K/M2171K)	
	1-693-302-11	TUNER (UV1315) (KV-M2170L/M2171L)	
	8-598-333-00	TUNER (BT-AU601) (KV-M2170U/M2171U)	
26	4-308-870-00	CLIP, LEAD WIRE	
27	1-452-032-00	MAGNET, DISK; 10MM Ø	
28	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
29	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
30	3-701-007-00	BAND, BINDING	

SECTION 7
ELECTRICAL PARTS LIST

When indicating parts by reference number, please include the board name.

CAPACITORS MF : mF, PF : mmF

COILS MMH : mH, μH : mH

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

A

REF.NO.	PART NO.	DESCRIPTION		REMARK
	*A-1632-310-A	A BOARD, COMPLETE (KV-M2170A)		
		**********		
	*A-1632-309-A	A BOARD, COMPLETE (KV-M2171A)		
		**********		
	*A-1632-314-A	A BOARD, COMPLETE (KV-M2170B)		
		**********		
	*A-1632-315-A	A BOARD, COMPLETE (KV-M2171B)		
		**********		
	*A-1632-308-A	A BOARD, COMPLETE (KV-M2170D)		
		**********		
	*A-1632-307-A	A BOARD, COMPLETE (KV-M2171D)		
		**********		
	*A-1632-313-A	A BOARD, COMPLETE (KV-M2170E)		
		**********		
	*A-1632-311-A	A BOARD, COMPLETE (KV-M2171E)		
		**********		
	*A-1632-306-A	A BOARD, COMPLETE (KV-M2170K)		
		**********		
	*A-1632-304-A	A BOARD, COMPLETE (KV-M2171K)		
		**********		
	*A-1632-305-A	A BOARD, COMPLETE (KV-M2171KR)		
		**********		
	*A-1632-303-A	A BOARD, COMPLETE (KV-M2170L)		
		**********		
	*A-1632-302-A	A BOARD, COMPLETE (KV-M2171L)		
		**********		
	*A-1632-301-A	A BOARD, COMPLETE (KV-M2170U)		
		**********		
	*A-1632-300-A	A BOARD, COMPLETE (KV-M2171U)		
		**********		
	4-201-023-01	SPACER, INSULATING		
	4-202-373-01	SPRING, IC		
	4-368-683-21	SPRING, TRANSISTOR		
	4-382-854-11	SCREW (M3X10), P, SW (+)		
	4-812-134-00	RIVET (DIA. 3.5), NYLON		
		< CAPACITOR >		
C001	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C002	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C004	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C005	1-126-964-11	ELECT 10MF	20%	50V
C006	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C007	1-130-777-00	FILM 0.1MF	5%	63V
C008	1-128-551-11	ELECT 22MF	20%	50V
C010	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C011	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C012	1-163-031-91	CERAMIC CHIP 10000PF		50V
C014	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C015	1-126-964-11	ELECT 10MF	20%	50V
C016	1-164-005-11	CERAMIC CHIP 0.47MF		16V
C017	1-164-005-11	CERAMIC CHIP 0.47MF		16V
C019	1-124-903-11	ELECT 1MF	20%	50V
C020	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C021	1-163-071-91	CERAMIC CHIP 0.01MF		50V
C022	1-124-903-11	ELECT 1MF	20%	50V
C024	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C025	1-126-964-11	ELECT 10MF	20%	50V
C026	1-126-964-11	ELECT 10MF	20%	50V
C027	1-163-038-91	CERAMIC CHIP 100000PF		25V
C028	1-163-055-91	CERAMIC CHIP 0.0047MF	10%	50V
C029	1-163-009-91	CERAMIC CHIP 1000PF	10%	50V
C030	1-163-021-91	CERAMIC CHIP 10000PF	10%	100V
C031	1-163-009-91	CERAMIC CHIP 1000PF	5%	25V
C033	1-137-126-91	FILM 0.01MF	5%	63V
C101	1-164-005-11	CERAMIC CHIP 0.47MF		16V
C102	1-164-005-11	CERAMIC CHIP 0.47MF		16V
C103	1-164-005-11	CERAMIC CHIP 0.47MF		16V
C104	1-163-021-91	CERAMIC CHIP 0.01MF (KV-M2170A/M2171A/M2170B/M2171B/M2170D M2171D/M2170E/M2171E)	10%	50V
C109	1-163-038-91	CERAMIC CHIP 0.1MF (KV-M2170A/M2171A/M2170B/M2171B/M2170D M2171D/M2170E/M2171E)		25V
C110	1-163-021-91	CERAMIC CHIP 0.01MF (KV-M2170A/M2171A/M2170B/M2171B/M2170D M2171D/M2170E/M2171E)	10%	50V
C112	1-137-399-11	FILM 0.1MF (KV-M2170A/M2171A/M2170B/M2171B/M2170D M2171D/M2170E/M2171E)	5%	50V
C114	1-136-169-00	FILM 0.22MF	5%	50V
C116	1-124-925-11	ELECT 2.2MF (KV-M2170A/M2171A/M2170B/M2171B/M2170D M2171D/M2170E/M2171E)	20%	50V
C117	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C120	1-126-925-11	ELECT 470MF	20%	10V
C121	1-136-153-00	FILM 0.01MF	5%	50V
C122	1-164-665-11	CERAMIC CHIP 0.039MF	10%	50V
C123	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C124	1-164-665-11	CERAMIC CHIP 0.039MF	10%	50V
C126	1-104-658-91	ELECT 47MF	20%	16V
C127	1-128-551-11	ELECT 22MF	20%	50V
C131	1-163-141-00	CERAMIC CHIP 0.001MF (KV-M2170K/M2171K/M2171KR)	10%	50V
C138	1-124-925-11	ELECT 2.2MF	20%	50V
C139	1-124-925-11	ELECT 2.2MF	20%	50V

A

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION		REMARK
C140	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C141	1-128-551-11	ELECT 22MF	20%	50V
C147	1-164-665-11	CERAMIC CHIP 0.039MF	10%	50V
C149	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C150	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C151	1-163-009-91	CERAMIC CHIP 0.001MF	10%	50V
C152	1-126-964-11	ELECT 10MF	20%	50V
C153	1-163-470-91	CERAMIC CHIP 15PF	5%	50V
C154	1-163-031-91	CERAMIC CHIP 0.01MF		50V
C155	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C157	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C158	1-124-927-11	ELECT 4.7MF	20%	50V
C161	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		
C162	1-104-658-91	ELECT 47MF	20%	16V
C164	1-162-638-11	CERAMIC CHIP 1MF		16V
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		
C165	1-104-658-91	ELECT 47MF	20%	16V
C166	1-104-658-91	ELECT 100MF	20%	10V
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		
C167	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C168	1-163-205-00	CERAMIC CHIP 0.001MF	10%	50V
C200	1-163-071-91	CERAMIC CHIP 0.01MF	10%	50V
C300	1-126-934-11	ELECT 220MF	20%	16V
C301	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C302	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C304	1-163-059-91	CERAMIC CHIP 0.01MF	10%	50V
C305	1-124-925-11	ELECT 2.2MF	20%	50V
C306	1-130-494-11	FILM 0.082MF	5%	50V
C307	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C308	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C309	1-124-927-11	ELECT 4.7MF	20%	50V
C310	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C312	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C313	1-163-145-00	CERAMIC CHIP 0.0015MF	5%	50V
C314	1-163-077-91	CERAMIC CHIP 0.1MF		50V
C315	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C316	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C317	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C318	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C319	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C320	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C321	1-124-927-11	ELECT 4.7MF	20%	50V
C323	1-163-163-91	CERAMIC CHIP 18PF	5%	50V
C324	1-163-119-00	CERAMIC CHIP 120PF	5%	50V
C325	1-163-035-00	CERAMIC CHIP 0.1MF	10%	25V
C326	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C327	1-163-005-91	CERAMIC CHIP 470PF	10%	50V
C328	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C329	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V
C330	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C332	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C333	1-163-033-91	CERAMIC CHIP 0.022MF		50V
C335	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C336	1-162-638-11	CERAMIC CHIP 1MF		16V
C337	1-162-638-11	CERAMIC CHIP 1MF		16V
C338	1-128-551-11	ELECT 22MF	20%	50V

REF.NO.	PART NO.	DESCRIPTION		REMARK
C339	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C340	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C341	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C344	1-104-658-91	ELECT 47MF	20%	50V
C345	1-163-139-00	CERAMIC CHIP 820PF	10%	50V
C347	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C348	1-163-031-91	CERAMIC CHIP 0.01MF		50V
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		
C349	1-128-551-11	ELECT 22MF	20%	50V
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		
C350	1-163-004-11	CERAMIC CHIP 0.1MF	10%	25V
C351	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C353	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C355	1-163-071-91	CERAMIC CHIP 0.01MF		50V
C358	1-163-021-91	CERAMIC CHIP 0.01MF	10%	100V
C359	1-126-964-11	ELECT 10MF	20%	50V
C360	1-163-021-91	CERAMIC CHIP 10000PF	10%	100V
C401	1-104-658-91	ELECT 47MF	20%	16V
C402	1-163-009-91	CERAMIC CHIP 0.001MF	10%	50V
C404	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C405	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C406	1-124-927-11	ELECT 4.7MF	20%	50V
C407	1-104-666-11	ELECT 220MF	20%	25V
C408	1-126-941-11	ELECT 470MF	20%	25V
C410	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C412	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C413	1-124-927-11	ELECT 4.7MF	20%	50V
C415	1-163-009-91	CERAMIC CHIP 0.001MF	10%	50V
C416	1-163-031-91	CERAMIC CHIP 0.01MF		50V
C417	1-163-031-91	CERAMIC CHIP 0.01MF		50V
C418	1-163-205-00	CERAMIC CHIP 0.001MF	10%	50V
C500	1-130-489-00	FILM 0.033MF	5%	50V
C501	1-124-927-11	ELECT 4.7MF	20%	50V
C502	1-163-077-91	CERAMIC CHIP 0.1MF		50V
C503	1-126-952-11	ELECT 1000MF	20%	35V
C504	1-124-122-11	ELECT 100MF	20%	50V
C505	1-126-941-11	ELECT 470MF	20%	25V
C506	1-163-009-91	CERAMIC CHIP 0.001MF	10%	50V
C507	1-124-903-11	ELECT 1MF	20%	50V
C508	1-130-785-11	MYLAR 0.47MF	10%	100V
C509	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C600	1-126-967-11	ELECT 47MF	20%	50V
C601 ⚠	1-136-516-12	FILM 0.1MF	20%	300V
C602 ⚠	1-136-516-12	FILM 0.1MF	20%	300V
C603 ⚠	1-162-599-12	CERAMIC 0.0047MF		250V
C604 ⚠	1-162-599-12	CERAMIC 0.0047MF		250V
C606	1-113-473-11	CAP, ELECT 180MF		
C607	1-104-666-11	ELECT 220MF	20%	25V
C608	1-126-964-11	ELECT 10MF	20%	50V
C609	1-109-921-11	CERAMIC 0.0015MF	10%	500V
C610	1-104-665-11	ELECT 100MF	20%	25V
C611	1-126-964-11	ELECT 10MF	20%	50V
C612 ⚠	1-161-742-00	CERAMIC 0.0022MF	20%	400V
C613 ⚠	1-161-742-00	CERAMIC 0.0022MF	20%	400V
C614	1-136-538-11	FILM 0.001MF	3%	2KV
C615	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C618	1-162-116-00	CERAMIC 680PF	10%	2KV
C619	1-102-228-00	CERAMIC 470PF	10%	500V

A

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
C620	1-124-347-00	ELECT 100MF 20% 160V	
C621	1-126-942-61	ELECT 1000MF 20% 25V	
C622	1-111-041-51	ELECT 1000MF 20% 16V	
C625	1-164-222-11	CERAMIC CHIP 0.22MF 25V	
C626	1-104-658-91	ELECT 100MF 20% 16V	
C627	1-104-658-91	ELECT 100MF 20% 16V	
C800	1-126-772-11	ELECT 1MF 20% 250V	
C801	1-129-746-00	FILM 0.039MF 10% 400V	
C803	1-136-109-00	FILM 0.68MF 5% 200V	
C804	1-124-902-00	ELECT 0.47MF 20% 50V	
C806	1-102-244-00	CERAMIC 220PF 10% 500V	
C807	1-107-652-11	ELECT 10MF 20% 250V	
C808	1-136-079-00	FILM 0.01MF 3% 2KV	
C809	1-161-754-00	CERAMIC 0.001MF 10% 2KV	
C810	1-129-702-00	FILM 0.001MF 10% 400V	
C811	1-102-228-00	CERAMIC 470PF 10% 500V	
C815	1-162-116-00	CERAMIC 680PF 10% 2KV	
C816	1-162-114-00	CERAMIC 0.0047MF 2KV	
C817	1-136-559-11	MYLAR 0.0047MF 10% 400V	
C818	1-136-933-11	FILM 1MF 5% 100V	
C819	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C820	1-126-951-11	ELECT 220MF 20% 35V	
C822	1-104-696-11	FILM 0.015MF 10% 100V	
C823	1-106-375-12	MYLAR 0.022MF 10% 250V	
C824	1-106-367-00	MYLAR 0.01MF 10% 400V	
C827	1-164-182-11	CERAMIC CHIP 0.0033MF 10% 50V	
C828	1-124-903-11	ELECT 1MF 20% 50V	
C829	1-163-063-91	CERAMIC CHIP 0.022MF 10% 50V	
		< FILTER >	
CF101	1-404-801-31	TRAP, CERAMIC (KV-M2170A/M2171A/M2170D/M2171D/M2170E/ M2171E/M2170K/M2171K/M2171KR)	
	1-409-429-11	TRAP, CERAMIC (KV-M2170L/M2171L/M2170U/M2171U)	
	1-409-430-11	TRAP, CERAMIC (KV-M2170B/M2171B)	
CF102	1-409-327-00	TRAP, CERAMIC (6.5 MHz) (KV-M2170K/M2171K/M2171KR)	
CF103	1-567-100-00	FILTER, CERAMIC (KV-M2170L/M2171L/M2170U/M2171U)	
	1-760-106-11	FILTER, CERAMIC (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M2170K/M2171K/ M2171KR)	
CF104	1-567-101-11	FILTER, CERAMIC (KV-M2170K/M2171K/M2171KR)	
CF105	1-760-154-11	TRAP, CERAMIC (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
SWF101	1-579-120-11	FILTER, SURFACE WAVE (KV-M2170A/M2171A/M2170D/M2171D/M2170E/ M2171E)	
	1-579-273-11	FILTER, SURFACE WAVE (KV-M2170B/M2171B)	
	1-579-414-11	FILTER, SURFACE WAVE (KV-M2170K/M2171K/M2171KR)	
	1-760-711-11	FILTER, SURFACE WAVE (KV-M2170L/M2171L/M2170U/M2171U)	
SWF102	1-760-722-11	FILTER, SURFACE WAVE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	

REF.NO.	PART NO.	DESCRIPTION	REMARK
		< CONNECTOR >	
CN001	*1-568-880-51	PIN, CONNECTOR 5P	
CN201	*1-564-506-11	PLUG, CONNECTOR 3P	
CN601 ⚠	*1-580-844-11	PIN, CONNECTOR (POWER)	
CN603 ⚠	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN801	*1-580-798-11	CONNECTOR PIN (DY) 6P	
CNA81	*1-568-881-51	PIN, CONNECTOR 6P	
CNA82	*1-568-880-51	PIN, CONNECTOR 5P	
		< DIODE >	
D001	8-719-052-94	DIODE LR5360-DG	
D002	8-759-157-40	IC μPC574J	
D004	8-719-109-85	DIODE RD5.1ESB2	
D005	8-719-991-33	DIODE 1SS133T-77	
D006	8-719-991-33	DIODE 1SS133T-77	
D014	8-719-991-33	DIODE 1SS133T-77	
D100	8-719-991-33	DIODE 1SS133T-77	
D102	8-719-903-27	DIODE 1SS168 (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
D104	8-719-903-27	DIODE 1SS168 (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
D105	8-719-991-33	DIODE 1SS133T-77 (KV-M2170K/M2171K/ M2171KR)	
D106	8-719-991-33	DIODE 1SS133T-77 (KV-M2170K/M2171K/M2171KR)	
D107	8-719-991-33	DIODE 1SS133T-77	
D109	8-719-820-71	DIODE 1SV214	
D301	8-719-991-33	DIODE 1SS133T-77	
D302	8-719-991-33	DIODE 1SS133T-77	
D305	1-247-821-91	CARBON 390 5% 1/4W	
D307	8-719-991-33	DIODE 1SS133T-77 (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
D308	8-719-991-33	DIODE 1SS133T-77 (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
D401	8-719-109-97	DIODE RD6.8ESB2	
D402	8-719-109-97	DIODE RD6.8ESB2	
D403	8-719-109-97	DIODE RD6.8ESB2	
D404	8-719-109-97	DIODE RD6.8ESB2	
D405	8-719-109-97	DIODE RD6.8ESB2	
D406	8-719-109-97	DIODE RD6.8ESB2	
D407	8-719-109-97	DIODE RD6.8ESB2	
D408	8-719-109-97	DIODE RD6.8ESB2	
D409	8-719-991-33	DIODE 1SS133T-77	
D410	8-719-109-97	DIODE RD6.8ESB2	
D414	8-719-991-33	DIODE 1SS133T-77	
D501	8-719-302-43	DIODE EL1Z	
D600	8-719-991-33	DIODE 1SS133T-77	
D601	8-719-046-77	DIODE EM1-V1	
D602	8-719-312-61	DIODE EU-1Z	
D603	8-719-046-78	DIODE EG-1Z-V1	
D604	8-719-312-61	DIODE EU-1Z	
D605	8-719-312-61	DIODE EU-1Z	
D606	8-719-979-85	DIODE EGP20G	
D607	8-719-302-43	DIODE EL1Z	
D608	8-719-980-78	DIODE ERA83-006	
D610	8-719-025-88	DIODE GBU4JL-6088	

A

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
D611	8-719-991-33	DIODE 1SS133T-77	
D801	8-719-950-57	DIODE BYD33G	
D802	8-719-302-43	DIODE EL1Z	
D803	8-719-945-80	DIODE ERC06-15S	
D804	8-719-028-72	DIODE RGP02-17EL-6433	
D805	8-719-928-08	DIODE ERD28-08S	
D806	8-719-302-43	DIODE EL1Z	
D807	8-719-991-33	DIODE 1SS133T-77	
		< FUSE >	
F601 ⚠	1-576-231-11	FUSE (M.B.C.) 4A, 250V	
	1-533-230-11	HOLDER, FUSE ; F601	
		< FERRITE BEAD >	
FB001	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB002	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB003	1-410-397-31	FERRITE BEAD INDUCTOR 1.1UH	
FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB603	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB604	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB801	1-410-397-31	FERRITE BEAD INDUCTOR 1.1UH	
		< IC >	
IC001	8-759-354-63	IC SAA5290ZP/006 (KV-M2171KR)	
	8-759-354-64	IC SAA5290ZP/007 (KV-M2171A/M2171B/M2171D/M2171E/M2171K/M2171L/M2171U)	
	8-759-354-82	IC SAA5288ZP/007 (KV-M2170A/M2170B/M2170D/M2170E/M2170K/M2170L/M2170U)	
IC002	8-759-280-74	IC ST24C02CB1	
IC003	8-747-905-11	IC SBX1790-11	
IC101	8-759-333-17	IC TDA9812 (KV-M2170B/M2171B)	
	8-759-333-19	IC TDA9806 (KV-M2170A/M2171A/M2170D/M2171D/M2170E/M2171E/M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)	
IC301	8-759-333-44	IC MC44007P (KV-M2170A/M2171A/M2170E/M2171E/M2170L/M2171L/M2170U/M2171U)	
	8-759-333-45	IC MC44002P (KV-M2170B/M2171B/M2170D/M2171D/M2170K/M2171K/M2171KR)	
IC302	8-759-333-46	IC MC44140P	
IC401	8-759-041-82	IC TDA1013B	
	4-203-017-01	HEATSINK, VR ; IC401	
IC501	8-759-192-71	IC STV9379	
IC601	8-749-011-02	IC STR-S5706	
IC603	8-759-337-99	IC TDA8139	
		< SOCKET >	
J201	1-568-267-21	JACK	
J401	1-561-534-00	SOCKET 21P	
		< COIL >	
L101	1-410-669-31	INDUCTOR 33UH	
L105	1-408-411-00	INDUCTOR 15UH	
L108	1-408-405-00	INDUCTOR 4.7UH (KV-M2170K/M2171K/M2171KR)	
	1-408-408-00	INDUCTOR 8.2UH (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E/M2170L/M2171L/M2170U/M2171U)	
L109	1-403-686-12	COIL	
L110	1-410-673-31	INDUCTOR 68UH	
L111	1-410-665-41	INDUCTOR 15UH (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
L112	1-408-417-00	INDUCTOR 47UH	
L113	1-410-985-41	INDUCTOR CHIP 0.22UH (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E/M2170K/M2171K/M2171KR/M2170L/M2171L)	
	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-M2170U/M2171U)	
L201	1-412-531-31	INDUCTOR 33UH	
L602	1-408-609-41	INDUCTOR 33UH	
L603	1-410-669-31	INDUCTOR 33UH	
L604	1-408-417-00	INDUCTOR 47UH	
L800	1-412-553-41	INDUCTOR 3.3MMH	
L801	1-420-872-00	COIL,AIR CORE	
L802	1-407-365-00	COIL,CHOKE	
L803	1-459-390-00	COIL (WITH CORE)	
L804	1-459-105-21	COIL (WITH CORE)	
L805	1-412-531-21	INDUCTOR 33UH	
L806	1-459-652-12	COIL, HORIZONTAL LINEARITY	
		< IC LINK >	
PS602 ⚠	1-532-686-21	LINK, IC 2.7A (ICP-N75)	
PS603 ⚠	1-532-637-00	LINK, IC 1.0A (ICP-N25)	
		< TRANSISTOR >	
Q001	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
	8-729-922-66	TRANSISTOR 2SC2410SN (KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)	
Q002	8-729-173-38	TRANSISTOR 2SA733-K (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
	8-729-026-41	TRANSISTOR 2SA933AS-QRT (KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)	
Q005	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)	
Q006	8-729-173-38	TRANSISTOR 2SA733-K (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
	8-729-026-41	TRANSISTOR 2SA933AS-QRT (KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)	
Q007	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q008	8-729-119-78	TRANSISTOR 2SC2785-HFE	

A

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q009	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q010	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
Q011	8-729-900-89	TRANSISTOR DTC144ES	
Q012	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
Q013	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
Q014	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
Q015	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
Q016	8-729-216-22	TRANSISTOR 2SA1162-G	
Q100	8-729-901-01	TRANSISTOR DTC144EK	
Q101	8-729-900-80	TRANSISTOR DTC114ES (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q102	8-729-900-80	TRANSISTOR DTC114ES (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q103	8-729-900-80	TRANSISTOR DTC114ES (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q105	8-729-901-01	TRANSISTOR DTC144EK	
Q107	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q109	8-729-022-54	TRANSISTOR 2SC3779C,D-AA (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q110	8-729-901-01	TRANSISTOR DTC144EK	
Q111	8-729-900-89	TRANSISTOR DTC144ES (KV-M2170K/M2171K/M2171KR)	
Q112	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q113	8-729-900-89	TRANSISTOR DTC144ES (KV-M2170K/M2171K/M2171KR)	
Q114	8-729-901-01	TRANSISTOR DTC144EK	
Q115	8-729-173-38	TRANSISTOR 2SA9733-K (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q116	8-729-900-89	TRANSISTOR DTC144ES (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q300	8-729-900-80	TRANSISTOR DTC114ES	
Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q302	8-729-900-80	TRANSISTOR DTC114ES	
Q303	8-729-900-80	TRANSISTOR DTC114ES	
Q304	8-729-900-80	TRANSISTOR DTC114ES	
Q305	8-729-900-80	TRANSISTOR DTC114ES	
Q306	8-729-900-80	TRANSISTOR DTC114ES	
Q307	8-729-119-76	TRANSISTOR 2SA1175-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q308	8-729-901-01	TRANSISTOR DTC144EK	
Q401	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q402	8-729-173-38	TRANSISTOR 2SA733-K (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
	8-729-216-22	TRANSISTOR 2SA1162-G (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
Q403	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
Q404	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
Q600	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q602	8-729-900-65	TRANSISTOR DTA144ES	
Q801	8-729-140-96	TRANSISTOR 2SD774-34	
Q802	8-729-033-85	TRANSISTOR S2000N-16E30:A	
Q803	8-729-900-89	TRANSISTOR DTC144ES	
Q804	8-729-202-03	TRANSISTOR 2SD1408-Y	
Q805	8-729-140-96	TRANSISTOR 2SD774-34	

< RESISTOR >

JR004	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR007	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR008	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR009	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR012	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR013	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR014	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR015	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR017	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR018	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR019	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR020	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR021	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR026	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR027	1-216-296-91	METAL GLAZE	0	5%	1/8W
R001	1-216-222-91	METAL GLAZE	10K	5%	1/8W
R002	1-216-057-91	METAL GLAZE	2.2K	5%	1/10W
R004	1-216-238-00	METAL GLAZE	47K	5%	1/8W
R005	1-216-081-00	METAL GLAZE	22K	5%	1/10W

A

REF.NO.	PART NO.	DESCRIPTION			REMARK
R006	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R008	1-216-031-91	METAL GLAZE	180	5%	1/10W
R009	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R010	1-216-041-00	METAL GLAZE	470	5%	1/10W
R011	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R012	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R013	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R014	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R015	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R016	1-216-025-91	METAL GLAZE	100	5%	1/10W
R017	1-216-025-91	METAL GLAZE	100	5%	1/10W
R018	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R019	1-216-174-91	METAL GLAZE	100	5%	1/8W
R020	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R021	1-216-174-91	METAL GLAZE	100	5%	1/8W
R022	1-216-295-00	METAL GLAZE	0	5%	1/10W
R024	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R025	1-216-222-91	METAL GLAZE	10K	5%	1/8W
R026	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R027	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W
R028	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R029	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R030	1-215-900-11	METAL OXIDE	22K	5%	2W F
R031	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R032	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R033	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R034	1-247-855-91	CARBON	10K	5%	1/4W
R035	1-247-863-91	CARBON	22K	5%	1/4W
R036	1-216-059-91	METAL GLAZE	2.7K	5%	1/10W
R037	1-216-057-91	METAL GLAZE	2.2K	5%	1/10W
R039	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R040	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R042	1-216-230-00	METAL GLAZE	22K	5%	1/8W
R044	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R045	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R046	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R047	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R049	1-216-041-00	METAL GLAZE	470	5%	1/10W
R052	1-216-238-91	METAL GLAZE	47K	5%	1/8W
R055	1-216-057-91	METAL GLAZE	2.2K	5%	1/10W
R060	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R061	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R062	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R063	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R064	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R065	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R066	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R067	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R068	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R069	1-247-863-91	CARBON	22K	5%	1/4W
R070	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R071	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R072	1-216-230-00	METAL GLAZE	22K	5%	1/8W
R073	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R074	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R075	1-249-436-11	CARBON	39K	5%	1/4W
R078	1-216-071-91	METAL GLAZE	8.2K	5%	1/10W
R079	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R080	1-216-057-91	METAL GLAZE	2.2K	5%	1/10W
R081	1-249-438-11	CARBON	56K	5%	1/4W
R088	1-216-061-91	METAL GLAZE	3.3K	5%	1/10W
R089	1-216-061-91	METAL GLAZE	3.3K	5%	1/10W
R090	1-216-061-91	METAL GLAZE	3.3K	5%	1/10W
R091	1-249-427-11	CARBON	6.8K	5%	1/4W
R093	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R094	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R095	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R096	1-216-033-00	METAL GLAZE	220	5%	1/10W
R097	1-216-051-91	METAL GLAZE	1.2K	5%	1/10W
R098	1-216-051-91	METAL GLAZE	1.2K	5%	1/10W
R099	1-216-200-91	METAL GLAZE	1.2K	5%	1/8W
R102	1-216-234-91	METAL GLAZE	33K	5%	1/8W
R104	1-216-059-91	METAL GLAZE	2.7K	5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R105	1-216-025-91	METAL GLAZE	100	5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R106	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R107	1-216-017-91	METAL GLAZE	47	5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R108	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R109	1-216-025-91	METAL GLAZE	100	5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R110	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R111	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R112	1-216-057-91	METAL GLAZE	2.2K	5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R113	1-216-057-91	METAL GLAZE	2.2K	5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R114	1-216-073-00	METAL GLAZE	10K	5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R115	1-216-057-91	METAL GLAZE	2.2K	5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)
R116	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R117	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R118	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R122	1-216-025-91	METAL GLAZE	100	5%	1/10W (KV-M2170K/M2171K/M2171KR)
	1-216-029-00	METAL GLAZE	150	5%	1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M2170L/M2171L/ M2170U/M2171U)
R123	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R124	1-216-025-91	METAL GLAZE	100	5%	1/10W
R125	1-216-025-91	METAL GLAZE	100	5%	1/10W
R126	1-216-025-91	METAL GLAZE	100	5%	1/10W
R127	1-216-180-00	METAL GLAZE	180	5%	1/8W
R128	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R133	1-249-429-11	CARBON	10K	5%	1/4W

A

REF.NO.	PART NO.	DESCRIPTION	REMARK
R134	1-216-029-00	METAL GLAZE 150 5% 1/10W (KV-M2170L/M2171L/M2170U/M2171U)	
	1-216-031-91	METAL GLAZE 180 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M1440K/M1441K/ M1441KR)	
R136	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R137	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R138	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R141	1-216-057-91	METAL GLAZE 2.2K 5% 1/10W	
R142	1-216-057-91	METAL GLAZE 2.2K 5% 1/10W	
R143	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M2170L/M2171L/ M2170U/M2171U)	
R144	1-216-206-00	METAL GLAZE 2.2K 5% 1/8W (KV-M2170K/M2171K/M2171KR)	
R145	1-216-206-00	METAL GLAZE 2.2K 5% 1/8W (KV-M2170K/M2171K/M2171KR)	
R146	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R147	1-216-043-91	METAL GLAZE 560 5% 1/10W (KV-M2170K/M2171K/M2171KR)	
R149	1-216-057-91	METAL GLAZE 2.2K 5% 1/10W (KV-M2170K/M2171K/M2171KR)	
R151	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R153	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R154	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R155	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R157	1-216-049-91	METAL GLAZE 1K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R158	1-216-031-91	METAL GLAZE 180 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
	1-216-039-00	METAL GLAZE 390 5% 1/10W (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
R159	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R160	1-216-238-91	METAL GLAZE 47K 5% 1/8W	
R161	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-M2170A/M2171A/M2170D/M2171D/M2170E/ M2171E/M2170K/M2171K/M2171KR/ M2170L/M2171L/M2170U/M2171U)	
R162	1-216-017-91	METAL GLAZE 47 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R163	1-249-407-11	CARBON 150 5% 1/4W	
R167	1-216-246-91	METAL GLAZE 100K 5% 1/8W	
R168	1-249-407-11	CARBON 150 5% 1/4W	
R169	1-216-073-00	METAL GLAZE 10K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R170	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R171	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R175	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R176	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R177	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R178	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R179	1-216-212-91	METAL GLAZE 3.9K 5% 1/8W	
R180	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R205	1-247-741-11	CARBON 150 5% 1/2W	
R301	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R302	1-216-037-91	METAL GLAZE 330 5% 1/10W	
R303	1-216-090-00	METAL GLAZE 51K 5% 1/10W	
R304	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R305	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R306	1-216-113-91	METAL GLAZE 470K 5% 1/10W	
R307	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R308	1-216-234-91	METAL GLAZE 33K 5% 1/8W	
R309	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R310	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R311	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R312	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R313	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R314	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R315	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R316	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R317	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R318	1-216-019-91	METAL GLAZE 56 5% 1/10W	
R322	1-216-022-91	METAL GLAZE 75 5% 1/10W	
R323	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R325	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R326	1-216-115-91	METAL GLAZE 560K 5% 1/10W	
R327	1-216-097-91	METAL GLAZE 100 5% 1/10W	
R333	1-216-037-91	METAL GLAZE 330 5% 1/10W	
R334	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R335	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R336	1-216-296-91	METAL GLAZE 0 5% 1/8W	
R337	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R339	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R340	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R341	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R342	1-216-186-91	METAL GLAZE 330 5% 1/8W	
R343	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R344	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R345	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R347	1-216-041-00	METAL GLAZE 470 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R348	1-216-073-00	METAL GLAZE 10K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R349	1-216-105-91	METAL GLAZE 220K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R350	1-216-033-00	METAL GLAZE 220 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R351	1-216-292-11	METAL GLAZE 8.2M 5% 1/8W	
R352	1-216-262-91	METAL GLAZE 470K 5% 1/8W	
R353	1-247-804-11	CARBON 75 5% 1/4W	
R354	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R355	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R356	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R357	1-216-095-00	METAL GLAZE 82K 5% 1/10W	

A

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
R358	1-216-009-91	METAL GLAZE 22 5% 1/10W	
R359	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R361	1-216-022-91	METAL GLAZE 75 5% 1/10W	
R362	1-216-022-91	METAL GLAZE 75 5% 1/10W	
R363	1-216-022-91	METAL GLAZE 75 5% 1/10W	
R401	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R402	1-249-431-11	CARBON 15K 5% 1/4W	
R403	1-249-431-11	CARBON 15K 5% 1/4W	
R405	1-249-389-11	CARBON 4.7 5% 1/4W	F
R406	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R407	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R408	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R410	1-247-804-11	METAL GLAZE 75 5% 1/4W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M2170K/M2171K/ M2171KR)	
	1-247-698-11	METAL GLAZE 68 5% 1/4W (KV-M2170L/M2171L/M2170U/M2171U)	
R411	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R412	1-216-105-91	METAL GLAZE 220K 5% 1/10W	
R413	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R414	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R415	1-216-222-91	METAL GLAZE 10K 5% 1/8W	
R416	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R501	1-208-806-11	METAL CHIP 10K 0.50% 1/10W	
R502	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R503	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R504	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R505	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R507	1-216-350-11	METAL OXIDE 1.2 5% 1W	F
R508	1-215-865-11	METAL OXIDE 220 5% 1W	F
R509	1-249-383-11	CARBON 1.5 5% 1/4W	F
R600	1-216-365-00	METAL OXIDE 0.47 5% 2W	F
R601 ⚠	1-205-909-11	WIREWOUND 3.3 5% 10W	
R603	1-215-858-51	METAL OXIDE 15 5% 1W	F
R604	1-215-927-00	METAL OXIDE 47K 5% 3W	F
R606	1-249-441-11	CARBON 100K 5% 1/4W	
R607	1-216-366-51	METAL OXIDE 0.56 5% 2W	F
R608	1-216-647-11	METAL CHIP 680 0.50% 1/10W	
R609	1-215-859-00	METAL OXIDE 22 5% 1W	F
R610	1-249-419-11	CARBON 1.5K 5% 1/4W	
R611	1-215-430-00	METAL 2.4K 1% 1/4W	
R612 ⚠	1-202-719-00	SOLID 1M 10% 1/2W	
R614 ⚠	1-218-265-11	METAL 8.2M 5% 1W	
R615	1-217-371-00	FUSIBLE 0.47 10% 1/4W	F
R617	1-216-659-11	METAL CHIP 2.2K 0.50% 1/10W	
R618	1-216-659-11	METAL CHIP 2.2K 0.50% 1/10W	
R620	1-215-479-00	METAL 270K 1% 1/4W	
R621	1-249-429-11	CARBON 10K 5% 1/4W	
R622	1-247-895-91	METAL GLAZE 470K 5% 1/4W	
R623	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R624	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R625	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R626	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R627	1-216-346-00	METAL OXIDE 0.56 5% 1W	F
R630	1-249-401-11	CARBON 47 5% 1/4W	
R800	1-215-887-00	METAL OXIDE 150 5% 2W	F
R801	1-247-891-00	CARBON 330K 5% 1/4W	
R802	1-247-807-31	CARBON 100 5% 1/4W	
R803	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R804	1-217-778-11	FUSIBLE 1K 5% 1W	F
R806	1-216-349-00	METAL OXIDE 1 5% 1W	F
R807	1-247-795-91	METAL GLAZE 33 5% 1/10W	
R809	1-215-916-51	METAL OXIDE 680 5% 3W	F
R810	1-247-895-91	CARBON 470K 5% 1/4W	
R811	1-215-869-11	METAL OXIDE 1K 5% 1W	F
R812	1-215-869-11	METAL OXIDE 1K 5% 1W	F
R814	1-217-811-11	FUSIBLE 0.47 5% 1/4W	
R815	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R816	1-216-369-00	METAL OXIDE 1 5% 2W	F
R817	1-216-447-00	METAL OXIDE 27 5% 2W	F
R818	1-202-830-00	SOLID 10K 10% 1/2W	
R819	1-249-441-11	CARBON 100K 5% 1/4W	
R820	1-249-935-11	CARBON 3.3K 5% 1/4W	F
R822	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R823	1-216-232-91	METAL GLAZE 470 5% 1/8W	
R824	1-216-125-00	METAL GLAZE 1.5M 5% 1/10W	
R825	1-216-105-91	METAL GLAZE 220K 5% 1/10W	
R828	1-247-899-11	CARBON 680K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV102	1-241-765-11	RES, ADJ, METAL GLAZE 22K (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
RV801	1-241-630-11	RES, ADJ, CARBON 10K	
		< SWITCH >	
S001	1-571-532-21	SWITCH, TACTIL	
S002	1-571-532-21	SWITCH, TACTIL	
S003	1-571-532-21	SWITCH, TACTIL	
S004	1-571-532-21	SWITCH, TACTIL	
S005	1-571-532-21	SWITCH, TACTIL	
S006	1-571-532-21	SWITCH, TACTIL	
S601 ⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
		< TRANSFORMER >	
T601 ⚠	1-427-962-11	TRANSFORMER, LINE FILTER	
T602 ⚠	1-429-207-11	TRANSFORMER, CONVERTER	
T801	1-437-090-00	HDT	
T802 ⚠	1-453-199-11	TRANSFORMER ASSY, FLYBACK (NX-1741/02E)	
		< THERMISTOR >	
THP601 ⚠	1-808-059-31	THERMISTOR (POSITIVE)	
		< TUNER >	
TU101	1-693-303-11	TUNER (TELE1X001A) (KV-M2170A/M2171A)	
	1-693-331-00	TUNER (BT-AC401) (KV-M2170B/M2171B/M2170D/M2171D/M2170E/ M2171E/M2170K/M2171K/M2171KR/ M2170L/M2171L/M2170U/M2171U)	
		< CRYSTAL >	
X001	1-578-774-11	VIBRATOR, CRYSTAL	
X302	1-760-710-21	VIBRATOR, CRYSTAL (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

C

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1638-074-A	C BOARD, COMPLETE (KV-M2170A/M2171A/ M2170B/M2171B/ M2170D/M2171D/ M2170E/M2171E)	
	*A-1638-068-A	C BOARD, COMPLETE (KV-M2170K/M2171K/ M2171KR/M2170L/ M2171L/M2170U/ M2171U)	
		< CAPACITOR >	
C701	1-102-117-00	CERAMIC 820PF 10% 50V (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
C702	1-102-117-00	CERAMIC 820PF 10% 50V (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
C703	1-102-117-00	CERAMIC 820PF 10% 50V (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
C704	1-102-824-00	CERAMIC 470PF 5% 50V	
C705	1-102-824-00	CERAMIC 470PF 5% 50V	
C706	1-102-824-00	CERAMIC 470PF 5% 50V	
C707	1-136-189-00	FILM 0.1MF 10% 250V	
C709	1-162-114-00	CERAMIC 0.0047MF 2KV	
C710	1-104-660-91	ELECT 47MF 20% 16V	
		< CONNECTOR >	
CNC71	*1-568-881-51	PIN, CONNECTOR 6P	
CNC72	*1-568-880-51	PIN, CONNECTOR 5P	
CNC73	1-695-915-11	TAB (CONTACT)	
CNC76	1-695-915-11	TAB (CONTACT)	
		< DIODE >	
D701	8-719-991-33	DIODE 1SS133T-77	
D702	8-719-991-33	DIODE 1SS133T-77	
D703	8-719-991-33	DIODE 1SS133T-77	
D704	8-719-991-33	DIODE 1SS133T-77	
D705	8-719-991-33	DIODE 1SS133T-77	
D706	8-719-991-33	DIODE 1SS133T-77	
D707	8-719-991-33	DIODE 1SS133T-77	
D708	8-719-991-33	DIODE 1SS133T-77	
D709	8-719-991-33	DIODE 1SS133T-77	
D716	8-719-991-33	DIODE 1SS133T-77	
D717	8-719-054-81	DIODE 1SS292	
D718	8-719-991-33	DIODE 1SS133T-77	
D719	8-719-054-81	DIODE 1SS292	
D723	8-719-991-33	DIODE 1SS133T-77	
D724	8-719-054-81	DIODE 1SS292	
		< CRT SOCKET >	
[illegible]	1-526-990-21	SOCKET, CRT	
		< TRANSISTOR >	
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q704	8-729-906-70	TRANSISTOR BF871-127	
Q705	8-729-906-70	TRANSISTOR BF871-127	
Q706	8-729-906-70	TRANSISTOR BF871-127	
Q707	8-729-200-17	TRANSISTOR 2SA1091-O	
Q708	8-729-200-17	TRANSISTOR 2SA1091-O	
Q709	8-729-200-17	TRANSISTOR 2SA1091-O	

REF.NO.	PART NO.	DESCRIPTION			REMARK
		< RESISTOR >			
R701	1-249-417-11	CARBON	1K	5% 1/4W	
R702	1-249-417-11	CARBON	1K	5% 1/4W	
R705	1-247-791-91	CARBON	22	5% 1/4W	
R706	1-247-791-91	CARBON	22	5% 1/4W	
R707	1-247-791-91	CARBON	22	5% 1/4W	
R708	1-247-815-91	CARBON	220	5% 1/4W	
R709	1-247-815-91	CARBON	220	5% 1/4W	
R710	1-247-815-91	CARBON	220	5% 1/4W	
R711	1-249-417-11	CARBON	1K	5% 1/4W	
R714	1-249-417-11	CARBON	1K	5% 1/4W	
R715	1-249-417-11	CARBON	1K	5% 1/4W	
R716	1-249-417-11	CARBON	1K	5% 1/4W	
R717	1-247-758-11	CARBON	3.3K	5% 1/2W	
R718	1-247-758-11	CARBON	3.3K	5% 1/2W	
R719	1-247-758-11	CARBON	3.3K	5% 1/2W	
R720	1-216-487-11	METAL OXIDE	12K	5% 3W	F
R721	1-216-487-11	METAL OXIDE	12K	5% 3W	F
R722	1-216-487-11	METAL OXIDE	12K	5% 3W	F
R724	1-202-814-11	SOLID	33K	10% 1/2W	
R725	1-202-846-00	SOLID	470K	10% 1/2W	
R726	1-202-844-00	SOLID	330K	10% 1/2W	
R727	1-202-848-00	SOLID	680K	10% 1/2W	
R729	1-216-348-00	METAL OXIDE	0.82	5% 1W	F
R734	1-247-815-91	CARBON	220	5% 1/4W	
R735	1-247-815-91	CARBON	220	5% 1/4W	
R736	1-247-815-91	CARBON	220	5% 1/4W	
R744	1-247-756-11	CARBON	2.2K	5% 1/2W	
R745	1-247-756-11	CARBON	2.2K	5% 1/2W	
R746	1-247-756-11	CARBON	2.2K	5% 1/2W	
		< VARIABLE RESISTOR >			
RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M			
RV702	1-241-656-21	RES, ADJ, METAL FILM 110M			

****

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS	
		**********	
	1-452-032-00	MAGNET, DISK; 10MM Ø	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
	1-452-277-00	MAGNET, BMC	
⚠	1-453-199-11	TRANSFORMER ASSY, FLYBACK (NX-1741/U2E)	
⚠	1-460-090-21	COIL, DEGAUSSING (KV-M2170A/M2170B/M2171D/M2170E/M2171E/ M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
⚠	1-426-145-00	COIL, DEGAUSSING (KV-M2171A/M2171B/M2170D)	
	1-503-258-21	SPEAKER	
⚠	1-540-006-12	CAP ASSY, HIGH-VOLTAGE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
⚠	1-540-007-11	CAP ASSY, HIGH-VOLTAGE (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
⚠	1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
⚠	1-590-460-11	CORD, POWER (WITH CONNECTOR) 7.0A/250V (KV-M2170K/M2171K/M2171KR)	
⚠	1-590-762-11	CORD, POWER (WITH PLUG) 2.5A/250V (KV-M2170L/M2171L/M2170U/M2171U)	
	1-693-303-11	TUNER (TELE1X001A) (KV-M2170A/M2171A/M2171KR)	
	8-598-331-00	TUNER (BT-AC401) (KV-M2170B/M2171B/M2170D/M2171D/M2170E/ M2171E)	
	1-693-310-11	TUNER (TELE4X002A) (KV-M2170K/M2171K)	
	1-693-302-11	TUNER (UV1315)(KV-M2170L/M2171L)	
	8-598-333-00	TUNER (BT-AU601) (KV-M2170U/M2171U)	
⚠	8-451-295-45	DEFLECTION YOKE (Y21PF2BA)	
V901	⚠ 8-738-784-05	PICTURE TUBE (SD-169)(A51JXH61X)	
		**********	

REF.NO.	PART NO.	DESCRIPTION	REMARK
		ACCESSORIES AND PACKING MATERIALS	
		**********	
	4-203-127-41	MANUAL, INSTRUCTION (KV-M2170A/M2171A) (ITALIAN)	
	4-203-127-51	MANUAL, INSTRUCTION (KV-M2170B/M2171B) (FRENCH/GERMAN/ITALIAN)	
	4-203-127-11	MANUAL, INSTRUCTION (KV-M2170D/M2171D) (ENGLISH/GERMAN/DUTCH/ITALIAN/FINNISH)	
	4-203-130-11	MANUAL, INSTRUCTION (KV-M2170D/M2171D) (GERMAN)	
	4-203-127-71	MANUAL, INSTRUCTION (KV-M2170E/M2171E) (SPANISH)	
	4-203-127-81	MANUAL, INSTRUCTION (KV-M2170E/M2171E) (PORTUGUESE)	
	4-203-122-91	MANUAL, INSTRUCTION (KV-M2170K/M2171K) (ENGLISH/RUSSIAN/CZECH/HUNGARIAN/ POLISH/BULGARIAN)	
	4-203-154-91	MANUAL, INSTRUCTION (KV-M2171KR) (BULGARIAN/ENGLISH/RUSSIAN)	
	4-203-122-61	MANUAL, INSTRUCTION (KV-M2170L/M2171L/M2170U/M2171U) (ENGLISH)	
	*4-203-124-01	INDIVIDUAL CARTON (KV-M2170A/M2170K/M2171K/M2171KR/ M2170L/M2171L)	
	*4-203-124-11	INDIVIDUAL CARTON (KV-M2171A/M2170B/M2171B/M2170D/M2171D/ M2170E/M2171E)	
	*4-203-123-01	INDIVIDUAL CARTON (KV-M2170U/M2171U)	
	*4-203-111-01	CUSHION (UPPER) (ASSY) (KV-M2170A/M2170K/M2171K/M2171KR/ M2170L/M2171L/M2170U/M2171U)	
	*4-203-111-11	CUSHION (UPPER) (ASSY) (KV-M2171A/M2170B/M2171B/M2170D/M2171D/ M2170E/M2171E)	
	*4-203-112-01	CUSHION (BOTTOM) (ASSY) (KV-M2170A/M2170K/M2171K/M2171KR/ M2170L/M2171L/M2170U/M2171U)	
	*4-203-112-11	CUSHION (BOTTOM) (ASSY) (KV-M2171A/M2170B/M2171B/M2170D/M2171D/ M2170E/M2171E)	
	*4-042-477-01	BAG, PROTECTION (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
	*4-039-905-02	BAG, PROTECTION (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)	
		REMOTE COMMANDER	
		**********	
	1-473-194-11	COMMANDER, STANDARD TYPE (RM-836)	
		**********	